de maximis, inc.

**450 Montbrook Lane**
**Knoxville, TN 37919**
**(865) 691-5052**
**(865) 691-6485 FAX**

***Via Electronic Delivery***

April 28, 2022

Michael A. Zeolla
U.S. EPA—Region 2
290 Broadway, 19th Floor
New York, New York 10007

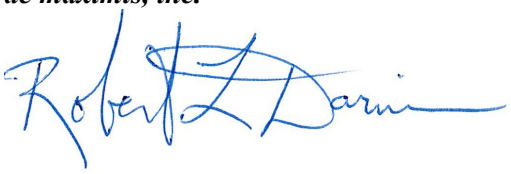
**Subject:** **Semi-Annual Groundwater Sampling Report (1H-2022)**
**D'Imperio Property Site, Hamilton Township, Atlantic County, New Jersey**

Dear Mr. Zeolla:

Enclosed please find the *Semi-Annual (1H-2022) Groundwater Sampling Report* for ongoing remedial activities at the D'Imperio Property Site performed in accordance with Administrative Order—Index No. II—CERCLA-20117. Groundwater sampling was performed March 7 - 11, 2022 pursuant to the *Long-Term Groundwater Monitoring Plan (LTGMP-Rev-3A)* and laboratory analyses with the *LTGMP* and associated *Quality Assurance Project Plan (2020)*.

If you have questions regarding the current data, please contact me at (865) 691-5052.

Best regards,
***de maximis, inc.***



Robert L. Darwin
Project Coordinator

RLD/jlr

Enclosures

cc: D'Imperio Property Site Group (via Electronic Delivery)
Kyle Ganow, Esq., USEPA (via Electronic Delivery)
Helen Dudar, NJDEP (via Electronic Delivery)
Branwen Ellis, Pinelands Commission (Via Electronic Delivery)
Emily S. Movsesian, U.S. Army Corps of Engineers (Via Electronic Delivery)
Jim Marolda, Brown & Caldwell (Electronic copy)
Steve Borton, O&M, Inc. (Electronic copy)
Michael Miller, de maximis, inc. (Electronic copy)

# Semi-Annual (1H-2022)
# Groundwater Sampling Data Report

**D'Imperio Property Site**
**Hamilton Township**
**Atlantic County, New Jersey**

**Submitted to:**
**USEPA—Region 2**
**New York, New York**

**Prepared for:**
**D'Imperio Property Site Group**
**c/o *de maximis, inc.***
**450 Montbrook Lane**
**Knoxville, Tennessee 37919**

*de maximis, inc.*

**April 2022**

## 1.0 INTRODUCTION

This *Semi-Annual 2022 Groundwater Sampling Report* provides documentation of the sampling event performed at the D'Imperio Property Site (Site) located in Hamilton Township, Atlantic County, New Jersey. Groundwater sampling was performed between March 7 – 11, 2022 on behalf of the D'Imperio Property Site Group (Group).

Groundwater sampling and analyses were performed in accordance with the final, approved *Long-Term Groundwater Monitoring Plan-Revision3A (LTGMP-Rev3A)* dated April 2020*,* the *Quality Assurance Project Plan (QAPP-2020)*, and the *Discharge to Groundwater Permit Equivalent (DGW)* issued by the New Jersey Department of Environmental Protection (NJDEP).

As a point of reference, Attachment 1 of this report contains several tables and figures from the *LTGMP-Rev3A.* The individual tables present: 1) details on the monitoring network, 2) identification of wells used in each aquifer for the collection of hydraulic and analytical data, 3) location/depth information for the network of wells, and 4) the specific *Groundwater Performance Standards*. The figures present a Site location map and the well network for each aquifer.

## 2.0 FIELD METHODS AND ACTIVITIES

Groundwater samples for the semi-annual event were collected from the set of monitoring wells, observation wells and sentinel wells identified and presented in Attachment 1. Brown and Caldwell (BC) collected samples from the designated monitoring wells and Operations & Maintenance, Inc. (O&M Inc.) collected the BR extraction well and force main influent samples on March 11, 2022. In addition, the quarterly (1Q22) effluent sample for testing of 1,4-dioxane was collected on February 9, 2022.

All groundwater sampling was performed using approved techniques described in the *QAPP – Unified Federal Policy (QAPP-2020)* to the *LTGMP-Rev3A*. Field Data Sheets from the sampling event are provided in Attachment 2 and include field laboratory forms and calibration records that relate to parameters measured in the field during sampling (e.g., pH, temperature, and dissolved oxygen). Testing for 1,4-dioxane was performed per Method 8270E SIM.

Prior to collection of groundwater samples, hydraulic monitoring of the entire well network was performed. The hydraulic monitoring data collected by O&M Inc. are provided in Attachment 3. Per the *LTGMP-Rev3*, quarterly hydraulic monitoring was performed on March 8, 2022, in conjunction with groundwater sampling.

## 3.0 ANALYSIS OF SAMPLES

All samples were sent to Eurofins-Lancaster Laboratories (ELL), Inc. in Lancaster, Pennsylvania for analysis. Each sample was analyzed for VOCs listed in the *Groundwater Performance Standards* as identified in Administrative Order—Index No. II—CERCLA-20117 and/or modified by the *LTGMP-Rev3A* via the approved methods and quality assurance/quality control measures detailed in the *QAPP-2020*. In addition, the effluent

sample was analyzed for 1,4-dioxane. ELL is certified by the State of New Jersey as Lab *D'Imperio Property Site* No. 77011.

## 4.0 RESULTS AND ANALYSIS

Hydraulic data collected during semi-annual event were used to prepare potentiometric groundwater surface contour maps. The maps are presented in Attachment 4. These maps were prepared by Brown and Caldwell and reflect groundwater elevation data, plume limits, hydraulic draw-down around extraction wells, and capture zones for each hydrogeologic unit at the Site during those time periods.

Analytical results from the semi-annual (1H-2022) groundwater sampling event are summarized in the tables located in Attachment 5 and presented in full in Attachment 6. The effluent sample collected during 1Q22 had a 1,4-dioxane concentration of 3.4 µg/L for Method 8270E SIM. Duplicate samples were collected relative to Quality Assurance/Quality Control (QA/QC) requirements in the *QAPP*. In addition to those QA/QC samples, trip blank and field blank samples were provided to the laboratory for analysis.

Attachment 7 presents the *Data Verification Report* prepared by BC for the analytical results. The report provides evaluation of QA/QC parameters as required by the *QAPP* and discussion of sampling results. Attachment 8 presents the long-term historic trends for Performance Standard TVOCs for each aquifer. Attachment 9 presents the Lower Cohansey Main Plume TVOC trends for individual sentinel, side-gradient and observation wells. Attachment 10 presents the TVOCs trends for key LCDP monitoring wells.

## 5.0 ACTIVITIES SCHEDULED FOR 2Q22 and 2H22

The following activities are scheduled for 2Q22 and 2H-2022:

- Perform quarterly hydraulic monitoring events in 2Q22, and 2H22.
- Perform the 2H22 semi-annual groundwater-sampling event.
- Prepare and submit the *Semi-Annual Groundwater Sampling Report* for 2H22.
- Prepare and submit the *2022 Annual Groundwater Report*.

## ATTACHMENTS

**Attachment 1:** Tables/Figures from the *LTGMP–Rev 3A*

**Attachment 2:** Field Data Sheets for Low-Flow Groundwater Sampling

**Attachment 3:** Hydraulic Monitoring Data

**Attachment 4:** Groundwater Potentiometric Surface/Plume Maps (March 2022)
- Bridgeton Aquifer
- Upper Cohansey Aquifer
- Lower Cohansey Aquifer (Main Plume and LCDP)
- LCDP Detailed View

**Attachment 5:** Semi-Annual 2022 Groundwater Sampling Data—Summary Tables

**Attachment 6:** Laboratory Data Analysis Reports
- Sample Data Group (SDG) – 410-72267-1 (1Q22 Effluent 1,4-dioxane)
- Sample Data Group (SDG) – 410-75935-1 (Extraction Well BR-3E)
- Sample Data Group (SDG) – 410-75934-1 (Effluent and Influent)
- Sample Data Group (SDG) – 410-75512-1 (Sentinel + BR plume wells)
- Sample Data Group (SDG) – 410-75949-1 (BR, UC and LCDP Wells)

**Attachment 7:** Data Verification Report (Semi-Annual Analyses)

**Attachment 8:** Historic Trends of TVOCs for each Aquifer (BR, UC, LC, LCDP)

**Attachment 9:** Lower Cohansey Main Plume TVOCs Trends for Sentinel Wells

**Attachment 10:** LCDP Monitoring Wells Trends (2005 – 2022)

# ATTACHMENT 1

## Tables from the Long-Term Groundwater Monitoring Plan – Rev3A

**D'Imperio Property Site**
**Semi-Annual (1H-2022)**
**Groundwater Sampling Report**

**TABLE 2-1**
**GROUNDWATER QUALITY NETWORK AND SAMPLING SCHEDULE [1.] [5.]**
**HISTORY OF PROGRAM**
**D'IMPERIO PROPERTY SITE**

| Well ID | Well Type | | Monitoring Frequency | | |
|---|---|---|---|---|---|
| | 2007 LTGMP [2.] Prior Designation | Current Designation | 2007 LTGMP [1.] | 2015 - 2019 [2.] | 2020 LTGMP-3A |
| **Bridgeton Sand (Tbr)** | | | | | |
| MW-20-1R | Side-Gradient | Former Plume | Annual | Annual | Once per 2.5 Years[3] |
| MW-24-1 | Side-Gradient | Side-Gradient | Annual | Semi-Annual | Semi-Annual |
| MW-25-1-R | Side-Gradient | Side-Gradient | Annual | None | Once per 5 Years[4] |
| MW-28-1 | Sentinel | Sentinel | Semi-Annual | Semi-Annual | Semi-Annual |
| MW-29-A | Sentinel | Sentinel | Semi-Annual | Annual | Once per 5 Years[4] |
| MW-40 | Side-Gradient | Side-Gradient | Semi-Annual | Annual | Annual |
| MW-41 | Plume | Side-Gradient | Semi-Annual | Semi-Annual | Semi-Annual |
| MW-42 | Side-Gradient | Side-Gradient | Annual | Annual | Once per 2.5 Years[3] |
| MW-43 | Plume | Plume | Semi-Annual | Annual | Semi-Annual |
| MW-44-1 | Background | Background | Annual | Annual | Once per 2.5 Years[3] |
| MW-52 | Plume | Former Plume | Annual | Annual | Annual |
| BR-1-E | Extraction | Extraction | None | None | Once per 5 Years[4] |
| BR-2-E | Extraction | Extraction | Semi-Annual | Semi-Annual | Once per 2.5 Years[3] |
| BR-3-E | Extraction | Extraction | Semi-Annual | Semi-Annual | Semi-Annual |
| BR-4-E | Extraction | Extraction | Semi-Annual | Semi-Annual | Once per 2.5 Years[3] |
| **Upper Cohansey Sand (Tuco)** | | | | | |
| MW-20-3-R | Plume | Former Plume | Annual | Annual | Annual |
| MW-23-2 | Plume | Former Plume | Annual | Annual | Once per 2.5 Years[3] |
| MW-24-2-R | Plume | Plume | Semi-Annual | Annual | Semi-Annual |
| MW-28-2 | Plume | Plume | Semi-Annual | Annual | Semi-Annual |
| MW-29-1 | Sentinel | Sentinel - Secondary | Semi-Annual | Semi-Annual | Annual |
| MW-34 | Sentinel | Sentinel - Secondary | None | Annual | Annual |
| MW-35 | Sentinel | Sentinel - Secondary | None | Annual | Annual |
| MW-37 | Side-Gradient | Side-Gradient | Annual | Annual | Annual |
| MW-38 | Side-Gradient | Side-Gradient | Annual | Annual | Annual |
| MW-44-2 | Background | Background | Annual | Annual | Once per 2.5 Years[3] |
| MW-48 | Side-Gradient | Side-Gradient | Annual | Annual | Once per 2.5 Years[3] |
| MW-49 | Side-Gradient | Sentinel | Annual | Semi-Annual | Semi-Annual |
| UC-1-E | Extraction | Extraction | Semi-Annual | Semi-Annual | Once per 2.5 Years[3] |
| UC-2-E | Extraction | Extraction | Semi-Annual | Semi-Annual | Once per 2.5 Years[3] |
| UC-3-E | Extraction | Extraction | Semi-Annual | Semi-Annual | Once per 2.5 Years[3] |
| UC-4-E | Extraction | Extraction | Semi-Annual | Semi-Annual | Annual |
| UC-6-E | Extraction | Extraction | Semi-Annual | Semi-Annual | Annual |
| **Lower Cohansey Main Plume (Tlco)** | | | | | |
| MW-29-2 | Plume | Former Plume | Semi-Annual | Annual | Annual |
| MW-31-2 | Side-Gradient | Side-Gradient | None | None | Once per 5 Years[4] |
| MW-32 | Plume | Former Plume | Semi-Annual | Annual | Annual |
| MW-33-2 | Plume | Plume | Semi-Annual | Annual | Annual |

**TABLE 2-1**
**GROUNDWATER QUALITY NETWORK AND SAMPLING SCHEDULE [1.] [5.]**
**HISTORY OF PROGRAM**
**D'IMPERIO PROPERTY SITE**

| Well ID | Well Type | | Monitoring Frequency | | |
|---|---|---|---|---|---|
| | 2007 LTGMP [2.] Prior Designation | Current Designation | 2007 LTGMP [1.] | 2015 - 2019 [2.] | 2020 LTGMP-3A |
| MW-45 | Plume | Plume | Annual | Annual | Annual |
| MW-46 | Plume | Plume | Annual | Annual | Annual |
| MW-47 | Plume | Plume | Annual | Annual | Annual |
| MW-50 | Plume | Side-Gradient | Semi-Annual | Semi-Annual | Annual |
| MW-51 | Plume | Plume | Annual | Annual | Annual |
| MW-53 | Side-Gradient | Side-Gradient | Semi-Annual | Semi-Annual | Annual |
| MW-54 | Plume | Side-Gradient | Semi-Annual | Annual | Once per 2.5 Years[3] |
| MW-55 | Sentinel | Sentinel | Quarterly | Semi-Annual | Semi-Annual |
| MW-56 | Sentinel | Sentinel | Quarterly | Semi-Annual | Semi-Annual |
| MW-57 | Sentinel | Sentinel | Quarterly | Semi-Annual | Annual |
| MW-58 | Side-Gradient | Side-Gradient | Semi-Annual | None | Once per 2.5 Years[3] |
| MW-59 | Plume | Sentinel | Semi-Annual | Semi-Annual | Semi-Annual |
| MW-60 | Sentinel | Sentinel | Quarterly | Semi-Annual | Annual |
| OBW-62 | Sentinel | Sentinel | None | Semi-Annual | Semi-Annual |
| OBW-63 | Sentinel | Sentinel | None | Semi-Annual | Semi-Annual |
| LC-2-E | Extraction | Extraction | Quarterly | Semi-Annual | Annual |
| LC-3-E | Extraction | Extraction | Quarterly | Semi-Annual | Annual |
| LC-4-E | Extraction | Extraction | Quarterly | Semi-Annual | Annual |
| LC-5-E | Extraction | Extraction | Quarterly | Semi-Annual | Annual |
| **Lower Cohansey Detached Plume (LCDP)** | | | | | |
| MW-66 | Not yet installed | Former Plume | None | Annual | Annual |
| MW-68 | Not yet installed | Former Plume | None | Semi-Annual | Annual |
| MW-69 | Not yet installed | Plume | None | Semi-Annual | Semi-Annual |
| MW-70 | Not yet installed | Plume | None | Quarterly | Semi-Annual |
| MW-71 | Not yet installed | Side-Gradient | None | Quarterly | Semi-Annual |
| MW-72 | Not yet installed | Side-Gradient | None | Quarterly | Annual |
| MW-73 | Not yet installed | Plume | None | Quarterly | Semi-Annual |
| MW-74 | Not yet installed | Side-Gradient | None | Quarterly | Semi-Annual |
| MW-75 | Not yet installed | Down-Gradient | None | Quarterly | Annual |
| MW-76 | Not yet installed | Down-Gradient | None | Quarterly | Annual |
| MW-77 | Not yet installed | Down-Gradient | None | Quarterly | Annual |
| MW-78 | Not yet installed | Down-Gradient | None | Quarterly | Annual |
| MW-79 | Not yet installed | Sentinel | None | Quarterly | Semi-Annual |
| MW-80 | Not yet installed | Sentinel | None | Quarterly | Semi-Annual |
| LC-7-E | Not yet installed | Extraction | None | Quarterly | Annual |
| LC-8-E | Not yet installed | Extraction | None | Quarterly | Annual |
| LC-9-E | Not yet installed | Extraction | None | Quarterly | Annual |

**TABLE 2-1**
**GROUNDWATER QUALITY NETWORK AND SAMPLING SCHEDULE [1.] [5.]**
**HISTORY OF PROGRAM**
**D'IMPERIO PROPERTY SITE**

| Well ID | Well Type | | Monitoring Frequency | | |
|---|---|---|---|---|---|
| | 2007 LTGMP [2.] Prior Designation | Current Designation | 2007 LTGMP [1.] | 2015 - 2019 [2.] | 2020 LTGMP-3A |
| **Sampling Frequency** | | | | | |
| Quarterly sampling is eliminated | | Quarterly | 8 | 14 | 0 |
| Semi-annual sampling to be conducted once per year, generally in March | | Semi-Annual | 24 | 28 | 20 |
| Annual sampling to be conducted once per year, generally in September (55 wells Total) | | Annual | 17 | 26 | 35 |
| Sampling conducted every 2.5 years in lieu of annual sampling, generally in either March or September (68 wells total) | | Once per 2.5 Years[3] | 0 | 0 | 13 |
| Sampling conducted every 5 years in lieu of annual sampling, generally in September (72 wells total) | | Once per 5 Years[4] | 0 | 0 | 4 |
| | | **Annualized Total Samples:** | **97** | **138** | **81** |

Notes:
(1.) Per the "Long Term Groundwater Monitoring Plan, D'Imperio Property Site, Revision 2B", (Brown and Caldwell, November 2007) .
(2.) As described in the "2014 Annual Groundwater Report", (Brown and Caldwell, June 2015).
(3.) The 2.5-Year frequency sampling event will also include those wells designated for Annual and Semi-Annual Sampling. The 2.5 year frequency will allow for seasonal variation in the execution of this sampling. During 1 sampling event per 5 year period the March and September samplings will be reversed.
(4.) The 5-Year frequency sampling event will also include those wells designated for the 2.5 year, Annual and Semi-Annual Sampling.
(5.) Only wells sampled as part of the 2007 LTGMP Revision 2B or later programs are included in this table.

**TABLE 3-1**
**HYDRAULIC MONITORING NETWORK**
**D'IMPERIO PROPERTY SITE**

| Well ID | Northing | Easting | Depth | Reference Elevation |
|---|---|---|---|---|
| **Bridgeton Sand Aquifer** | | | | |
| 20-2 | 226314.55 | 447063.85 | 28 | 64.66 |
| 23-1 | 226185.02 | 446815.62 | 26 | 65.30 |
| 24-1 | 226032.81 | 446387.36 | 29 | 69.63 |
| BR-1-E | 226419.16 | 446639.12 | 45 | 62.58 |
| BR-1-R | 226016.55 | 447400.66 | 38.5 | 67.04 |
| BR-2-E | 226130.03 | 446858.60 | 46 | 63.03 |
| BR-2-R | 226064.13 | 447472.27 | 36 | 65.65 |
| BR-3-E | 225947.56 | 446359.51 | 52 | 72.24 |
| BR-3-R | 226123.24 | 447404.72 | 52.3 | 65.55 |
| BR-4-E | 226261.70 | 447205.90 | 46 | 62.70 |
| MW-20-1-R | 226281.12 | 447066.57 | 42 | 64.84 |
| MW-25-1-R | 226409.59 | 446705.26 | 24 | 64.06 |
| MW-28-1 | 225714.87 | 445711.31 | 41 | 73.45 |
| MW-29-A | 225481.36 | 444712.02 | 40 | 58.52 |
| MW-31-A | 225695.34 | 443904.56 | 38 | 57.61 |
| MW-40 | 226143.02 | 446315.09 | 47 | 68.18 |
| MW-41 | 225894.66 | 446516.62 | 46 | 78.13 |
| MW-42 | 225655.33 | 446545.68 | 44 | 74.80 |
| MW-43 | 226024.84 | 446686.75 | 43 | 71.03 |
| MW-44-1 | 227033.01 | 447168.38 | 20 | 58.77 |
| **Upper Cohansey Sand Aquifer** | | | | |
| 23-2 | 226195.02 | 446814.64 | 62 | 65.67 |
| 25-2 | 226426.20 | 446712.07 | 60 | 64.61 |
| 26-2 | 225869.86 | 446908.04 | 75 | 74.09 |
| MW-20-3-R | 226295.23 | 447084.36 | 63 | 64.92 |
| MW-24-2-R | 226010.89 | 446335.84 | 63 | 70.36 |
| MW-28-2 | 225718.48 | 445707.52 | 93 | 72.98 |
| MW-29-1 | 225473.40 | 444708.38 | 65 | 60.80 |
| MW-31-1 | 225684.22 | 443907.03 | 65 | 58.95 |
| MW-33-1 | 224907.44 | 443612.23 | 55 | 53.74 |
| MW-34 | 225610.40 | 444834.18 | 70 | 61.66 |
| MW-35 | 225282.73 | 444969.57 | 68 | 62.18 |
| MW-36 | 225789.83 | 445064.40 | 72 | 65.76 |
| MW-37 | 225637.91 | 445134.32 | 74 | 67.92 |
| MW-38 | 225474.10 | 445201.21 | 74 | 68.51 |
| MW-39 | 225328.10 | 445259.44 | 76 | 67.00 |
| MW-44-2 | 227030.32 | 447159.48 | 72 | 58.89 |
| MW-48 | 225932.04 | 445596.49 | 80 | 79.63 |
| MW-49 | 225569.73 | 444940.00 | 80 | 64.17 |
| PZ-45 | 226415.99 | 447512.23 | 80 | 68.23 |
| PZ-46 | 226458.82 | 447539.38 | 80 | 68.23 |
| UC-1-E | 226201.55 | 447162.65 | 99 | 62.66 |
| UC-1-R | 226597.11 | 447483.06 | 71.5 | 59.31 |
| UC-2-E | 226115.29 | 446736.07 | 83.5 | 63.69 |
| UC-2-R | 226462.88 | 447553.10 | 84 | 61.54 |
| UC-3-E | 225929.60 | 446324.49 | 94 | 72.99 |
| UC-3-R | 226413.38 | 447558.52 | 78 | 59.98 |
| UC-4-E | 225829.14 | 445890.24 | 96 | 75.63 |
| UC-4-R | 226303.14 | 447584.01 | 86 | 62.67 |

**TABLE 3-1**
**HYDRAULIC MONITORING NETWORK**
**D'IMPERIO PROPERTY SITE**

| Well ID | Northing | Easting | Depth | Reference Elevation |
|---|---|---|---|---|
| UC-5-R | 226397.71 | 447402.69 | 92 | 62.95 |
| UC-6-E | 225546.21 | 444982.30 | 93 | 61.24 |
| UC-6-R | 226370.60 | 447573.03 | 78 | 62.14 |
| **Lower Cohansey Sand Aquifer** | | | | |
| LC-1-E | 225391.37 | 444379.67 | 165 | 49.36 |
| LC-1-R | 226168.75 | 447516.04 | 163 | 63.45 |
| LC-2-E | 224706.12 | 442726.14 | 136 | 52.20 |
| LC-2-R | 226559.30 | 447247.33 | 155 | 61.09 |
| LC-3-E | 224554.03 | 442898.41 | 136 | 51.23 |
| LC-3-R | 226261.00 | 447195.00 | 143 | 66.10 |
| LC-4-E | 224391.93 | 443015.75 | 136 | 51.71 |
| LC-5-E | 224290.51 | 443141.05 | 136 | 49.97 |
| LC-7-E | 222535.00 | 441642.00 | 138 | 42.10 |
| LC-8-E | 222624.00 | 441494.00 | 141 | 45.50 |
| LC-9-E | 222742.00 | 441378.00 | 144 | 48.92 |
| MW-29-2 | 225476.81 | 444704.85 | 140 | 59.26 |
| MW-31-2 | 225692.41 | 443903.76 | 130 | 57.78 |
| MW-32 | 225284.59 | 444169.03 | 130 | 53.57 |
| MW-33-2 | 224900.16 | 443624.36 | 130 | 51.86 |
| MW-45 | 224662.24 | 443067.79 | 125 | 51.18 |
| MW-46 | 224619.48 | 443191.68 | 118 | 52.04 |
| MW-47 | 224720.70 | 443040.07 | 125 | 52.56 |
| MW-50 | 224586.00 | 443441.10 | 131 | 50.32 |
| MW-51 | 224980.92 | 443165.43 | 127 | 54.65 |
| MW-53 | 225042.70 | 443020.40 | 128 | 54.13 |
| MW-54 | 224523.40 | 443526.70 | 130 | 49.48 |
| MW-55 | 224794.40 | 442710.20 | 128 | 51.79 |
| MW-56 | 224440.50 | 442779.20 | 128 | 52.58 |
| MW-57 | 224319.60 | 442802.50 | 128 | 50.69 |
| MW-58 | 224350.20 | 443674.50 | 128 | 52.97 |
| MW-59 | 224159.10 | 443085.90 | 128 | 48.93 |
| MW-60 | 224129.26 | 442819.15 | 125 | 49.26 |
| MW-64 | 223838.76 | 442091.46 | 145 | 54.22 |
| MW-65 | 223970.03 | 441511.68 | 155 | 56.30 |
| MW-66 | 223918.01 | 442689.81 | 130 | 47.79 |
| MW-67 | 224190.00 | 442474.00 | 133 | 56.99 |
| MW-68 | 223651.00 | 442521.00 | 128 | 45.61 |
| MW-69 | 223413.00 | 442279.00 | 130.3 | 43.44 |
| MW-70 | 223179.29 | 441939.66 | 130 | 48.35 |
| MW-71 | 222976.15 | 442171.94 | 135 | 55.55 |
| MW-72 | 223343.57 | 441732.38 | 135 | 55.21 |
| MW-73 | 222935.27 | 441692.07 | 118 | 53.56 |
| MW-74 | 222866.17 | 441912.67 | 125 | 55.15 |
| MW-75 | 222513.00 | 441694.00 | 130 | 46.29 |
| MW-76 | 222604.00 | 441544.00 | 130 | 46.33 |
| MW-77 | 222694.00 | 441436.00 | 130 | 49.51 |
| MW-78 | 222806.00 | 441366.00 | 130 | 50.98 |
| MW-79 | 222628.00 | 441395.00 | 130 | 48.80 |
| MW-80 | 222440.00 | 441438.00 | 130 | 44.61 |
| OBW-61 | 224300.71 | 443101.85 | 130 | 49.70 |

**TABLE 3-1**
**HYDRAULIC MONITORING NETWORK**
**D'IMPERIO PROPERTY SITE**

| Well ID | Northing | Easting | Depth | Reference Elevation |
|---|---|---|---|---|
| OBW-62 | 224402.29 | 442890.27 | 130 | 52.26 |
| OBW-63 | 224270.60 | 442976.30 | 130 | 50.04 |
| OBW-LC-2-E | 224766.80 | 442757.60 | 136 | 50.24 |
| OBW-LC-2-R | 226559.30 | 447247.33 | 125 | 60.05 |
| OBW-LC-3-E | 224543.88 | 442914.07 | 136 | 50.51 |
| OBW-LC-4-E | 224402.03 | 443023.61 | 136 | 49.78 |
| OBW-LC-5-E | 224290.54 | 443119.16 | 136 | 48.52 |
| OBW-LC-6-E | 223968.00 | 442307.00 | 139 | 58.69 |
| OBW-LC-7-E | 222529.00 | 441649.00 | 130 | 43.55 |
| OBW-LC-8-E | 222630.00 | 441488.00 | 133 | 47.35 |
| OBW-LC-9-E | 222750.00 | 441376.00 | 136 | 50.55 |

**TABLE 3-2**
**GROUNDWATER QUALITY NETWORK SAMPLING SCHEDULE**
**D'IMPERIO PROPERTY SITE**

| Well ID | Well Type | Monitoring Frequency | Methods/Constituents [1.] |
|---|---|---|---|
| **Bridgeton Sand (Tbr)** | | | |
| MW-20-1R | Former Plume | Every 2.5 years | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with Isotope Dilution (I.D.) |
| MW-24-1 | Side-Gradient | Semi-Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-25-1-R | Side-Gradient | Once per 5 years | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-28-1 | Sentinel | Semi-Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-29-A | Sentinel | Once per 5 years | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-40 | Side-Gradient | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-41 | Side-Gradient | Semi-Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-42 | Side-Gradient | Every 2.5 years | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-43 | Plume | Semi-Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-44-1 | Background | Every 2.5 years | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-52 | Former Plume | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| BR-1-E | Extraction | Once per 5 years | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| BR-2-E | Extraction | Every 2.5 Years | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| BR-3-E | Extraction | Semi-Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| BR-4-E | Extraction | Every 2.5 years | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| **Upper Cohansey Sand (Tuco)** | | | |
| MW-20-3-R | Former Plume | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-23-2 | Former Plume | Every 2.5 years | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-24-2-R | Plume | Semi-Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-28-2 | Plume | Semi-Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-29-1 | Sentinel | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-34 | Sentinel | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-35 | Sentinel | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-37 | Side-Gradient | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-38 | Side-Gradient | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-44-2 | Background | Every 2.5 years | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-48 | Side-Gradient | Every 2.5 years | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-49 | Sentinel | Semi-Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| UC-1-E | Extraction | Every 2.5 years | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| UC-2-E | Extraction | Every 2.5 years | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| UC-3-E | Extraction | Every 2.5 years | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| UC-4-E | Extraction | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| UC-6-E | Extraction | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| **Lower Cohansey Main Plume (Tlco)** | | | |
| MW-29-2 | Former Plume | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-31-2 | Side-Gradient | Once per 5 years | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-32 | Former Plume | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-33-2 | Plume | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-45 | Plume | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-46 | Plume | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-47 | Plume | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-50 | Side-Gradient | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-51 | Plume | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |

**TABLE 3-2**
**GROUNDWATER QUALITY NETWORK SAMPLING SCHEDULE**
**D'IMPERIO PROPERTY SITE**

| Well ID | Well Type | Monitoring Frequency | Methods/Constituents (1.) |
|---|---|---|---|
| MW-53 | Side-Gradient | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-54 | Plume | Every 2.5 years | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-55 | Sentinel | Semi-Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-56 | Sentinel | Semi-Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-57 | Sentinel | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-58 | Side-Gradient | Every 2.5 years | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-59 | Sentinel | Semi-Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-60 | Sentinel | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| OBW-62 | Sentinel | Semi-Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| OBW-63 | Sentinel | Semi-Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| LC-2-E | Extraction | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| LC-3-E | Extraction | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| LC-4-E | Extraction | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| LC-5-E | Extraction | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| **Lower Cohansey Detached Plume (LCDP)** | | | |
| MW-66 | Former Plume | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-68 | Former Plume | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-69 | Plume | Semi-Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-70 | Plume | Semi-Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-71 | Side-Gradient | Semi-Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-72 | Side-Gradient | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-73 | Plume | Semi-Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-74 | Side-Gradient | Semi-Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-75 | Down-Gradient | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-76 | Down-Gradient | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-77 | Down-Gradient | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-78 | Down-Gradient | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-79 | Sentinel | Semi-Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| MW-80 | Sentinel | Semi-Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| LC-7-E | Extraction | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| LC-8-E | Extraction | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |
| LC-9-E | Extraction | Annual | VOCs by 8260C, 1,4-Dioxane by 8270D SIM Modified with I.D. |

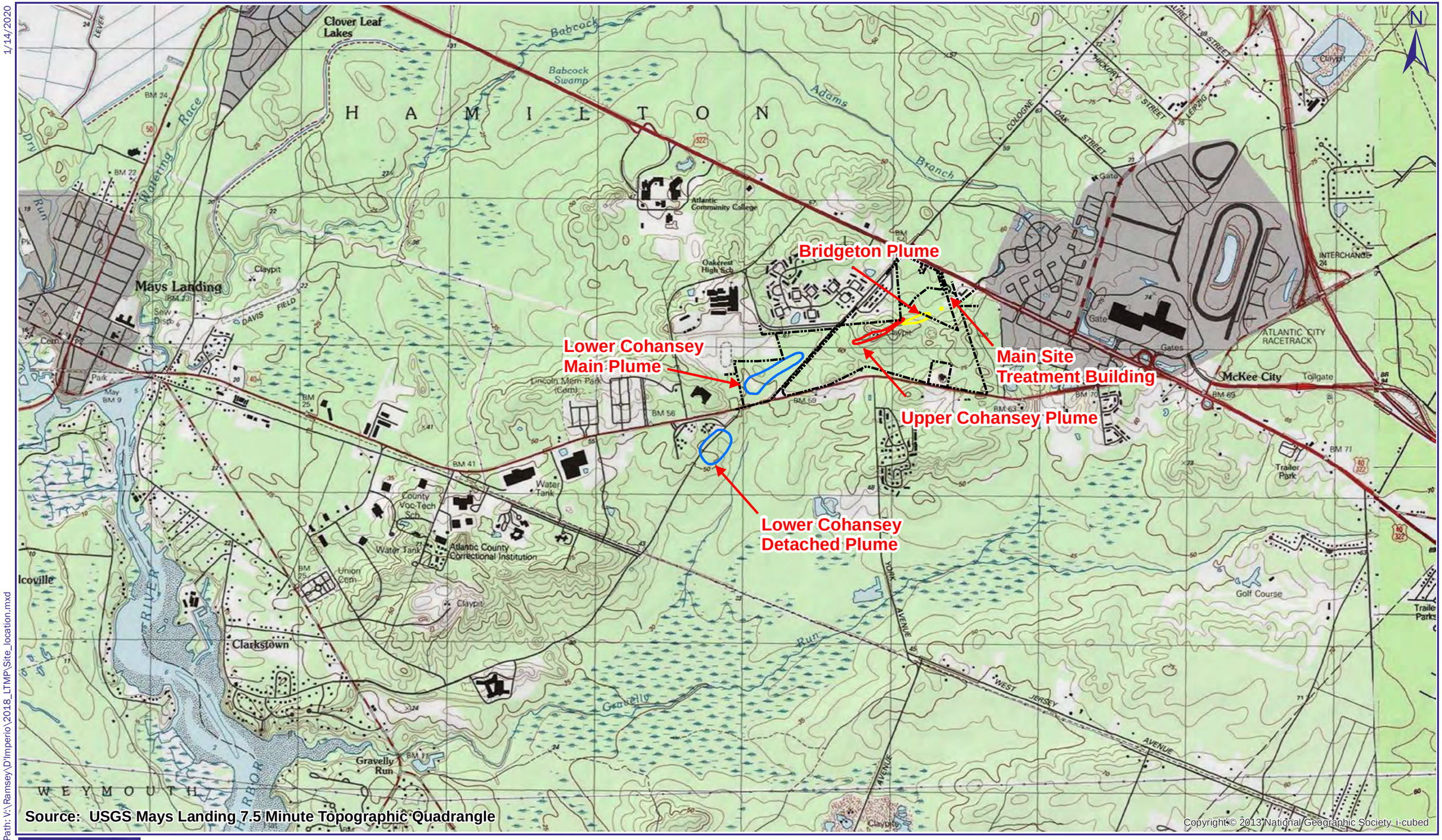
Notes:
(1.) 1,4-Dioxane will be analyzed for only during the annual, 2.5 year-frequency, and 5 year-frequency sampling events.

**TABLE 3-3**
**GROUNDWATER PERFORMANCE STANDARDS (ESTABLISHED BY ADMINISTRATIVE ORDER)**
**D'IMPERIO PROPERTY SITE**

| Parameter [a] | Chemical Abstract Service Number | Performance Standard [b] |
|---|---|---|
| **Conventionals (mg/L) [(e)]** | | |
| Biological Oxygen Demand (BOD) | SRP 29 | 8-10 |
| **Volatile Organic Compounds (µg/L)** | | |
| Benzene | 71-43-2 | 5 (c) |
| 2-Butanone[(e)(f)] | 78-93-3 | 100 |
| Chlorobenzene[(e)(f)] | 108-90-7 | (c) |
| Chloroform | 67-66-3 | 5 (c) |
| 1,1-Dichloroethane | 75-34-3 | (c) |
| 1,2-Dichloroethane | 107-06-2 | 5 (c) |
| 1,1-Dichloroethene | 75-35-4 | 5 (c) |
| 1,2-Dichloroethene (total) | 540-59-0 | (c) |
| 1,2-Dichloropropane | 78-87-5 | (c) |
| Ethylbenzene | 100-41-4 | (c) |
| Methylene chloride[(e)(f)] | 75-09-2 | 5 (c) |
| Tetrachloroethene | 127-18-4 | 5 (c) |
| Toluene | 108-88-3 | (c) |
| 1,1,1-Trichloroethane | 71-55-6 | 200 |
| Trichloroethene | 79-01-6 | 5 (c) |
| **Metals (µg/L) [(e)]** | | |
| Arsenic | 7440-38-2 | 50 |
| Chromium (total) | 7440-47-3 | Background |
| Copper | 7440-50-8 | 1,000 |
| Iron | 7439-89-6 | 300 |
| Lead | 7439-92-1 | 50 |
| Manganese | 7439-96-5 | 50 |
| Mercury | 7439-97-6 | 2 |
| Zinc | 7440-66-6 | 5,000 |
| **Semi-Volatile Organics (µg/L)** | | |
| Phenol [(d)] | 108-95-2 | 300 |
| **Inorganics (µg/L) [(e)]** | | |
| Chloride | 16887-00-6 | 10,000 |
| Sulfate | 14808-79-8 | 15,000 |

Notes:
(a) Only constituents with Performance Standard limits in the Administrative Order, Attachment IV are listed.
(b) Based on Administrative Order, Attachment IV limits.
(c) The sum of the listed VOCs may not exceed 50 µg/L. No compound-specific limit unless otherwise noted.
(d) Phenol was discontinued from routine groundwater quality monitoring in 2007, per USEPA approval of the LTGMP-2B.
(e) Certain additional Performance Standard parameters will be discontinued from routine groudwater monitoring including metals, inorganics, BOD, 2-butanone, chlorobenzene, and methylene chloride per USEPA approval of the LTGMP-3A. The monthly treatment plant effluent and biennial influent samples will continue to be tested for the full Performance Standard parameter list.
(f) Monthly influent samples will continue to be tested for each of the Performance Standard VOCs including 2-butanone, chlorobenzene, and methylene chloride.

1/14/2020




Source: USGS Mays Landing 7.5 Minute Topographic Quadrangle



Author: CMeyn Path: V:\Ramsey\D'Imperio\2018_LTMP\Site_location.mxd

Brown AND Caldwell

**FIGURE 1-1**
**SITE LOCATION MAP**
**D'IMPERIO PROPERTY SITE HAMILTON TWP, ATLANTIC CO. NEW JERSEY**

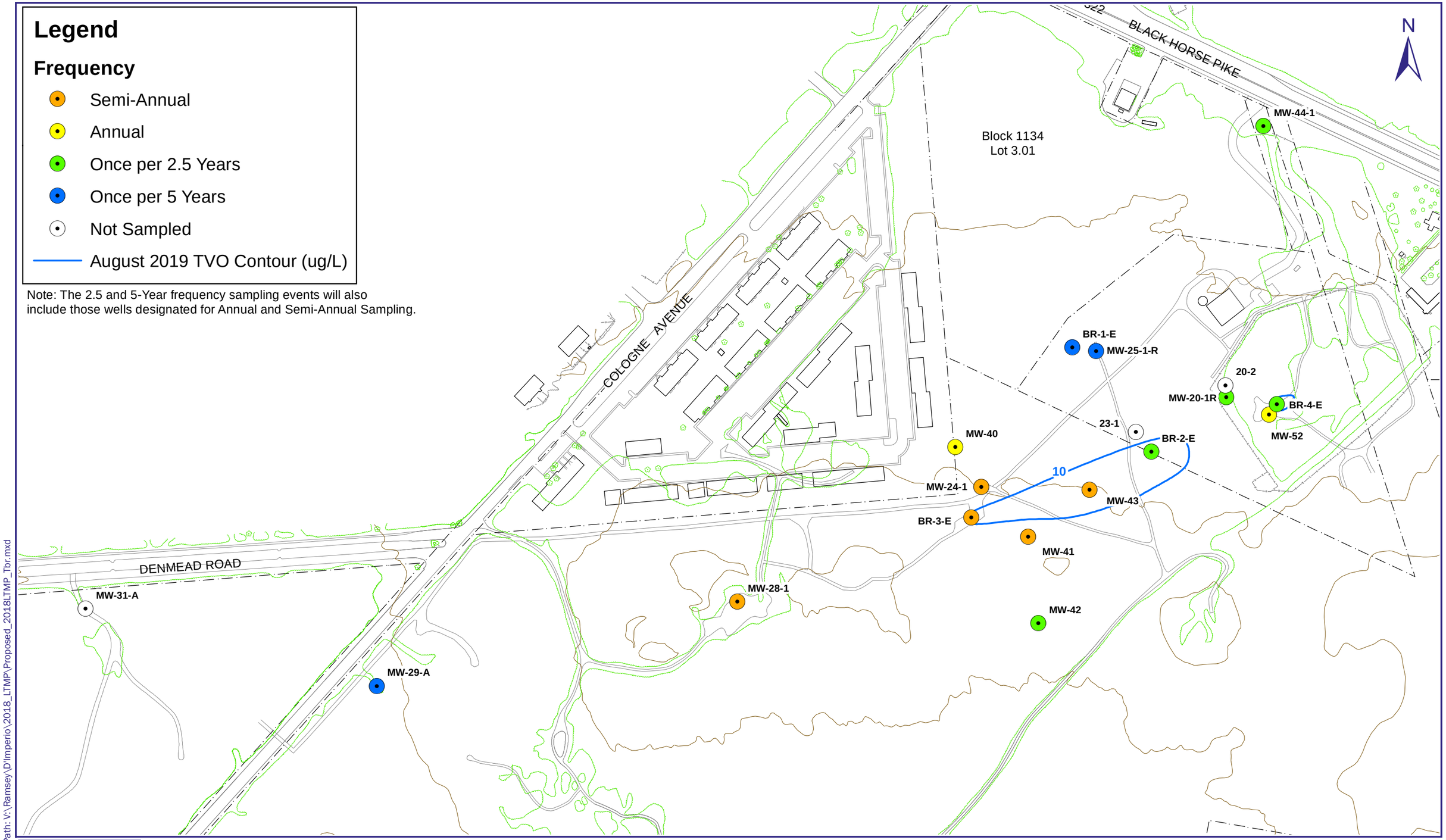
0 2,000 4,000
Feet

## Legend

### Frequency

- Semi-Annual
- Annual
- Once per 2.5 Years
- Once per 5 Years
- Not Sampled
- August 2019 TVO Contour (ug/L)

Note: The 2.5 and 5-Year frequency sampling events will also include those wells designated for Annual and Semi-Annual Sampling.




Author: CMeyn Path: V:\Ramsey\DImperio\2018_LTMP\Proposed_2018LTMP_Tbr.mxd

Brown AND Caldwell

**FIGURE 3-1**
**REVISED LTGMP WELL NETWORK - BRIDGETON SAND AQUIFER**
**D'IMPERIO PROPERTY SITE, HAMILTON TWP, ATLANTIC CO. NEW JERSEY**

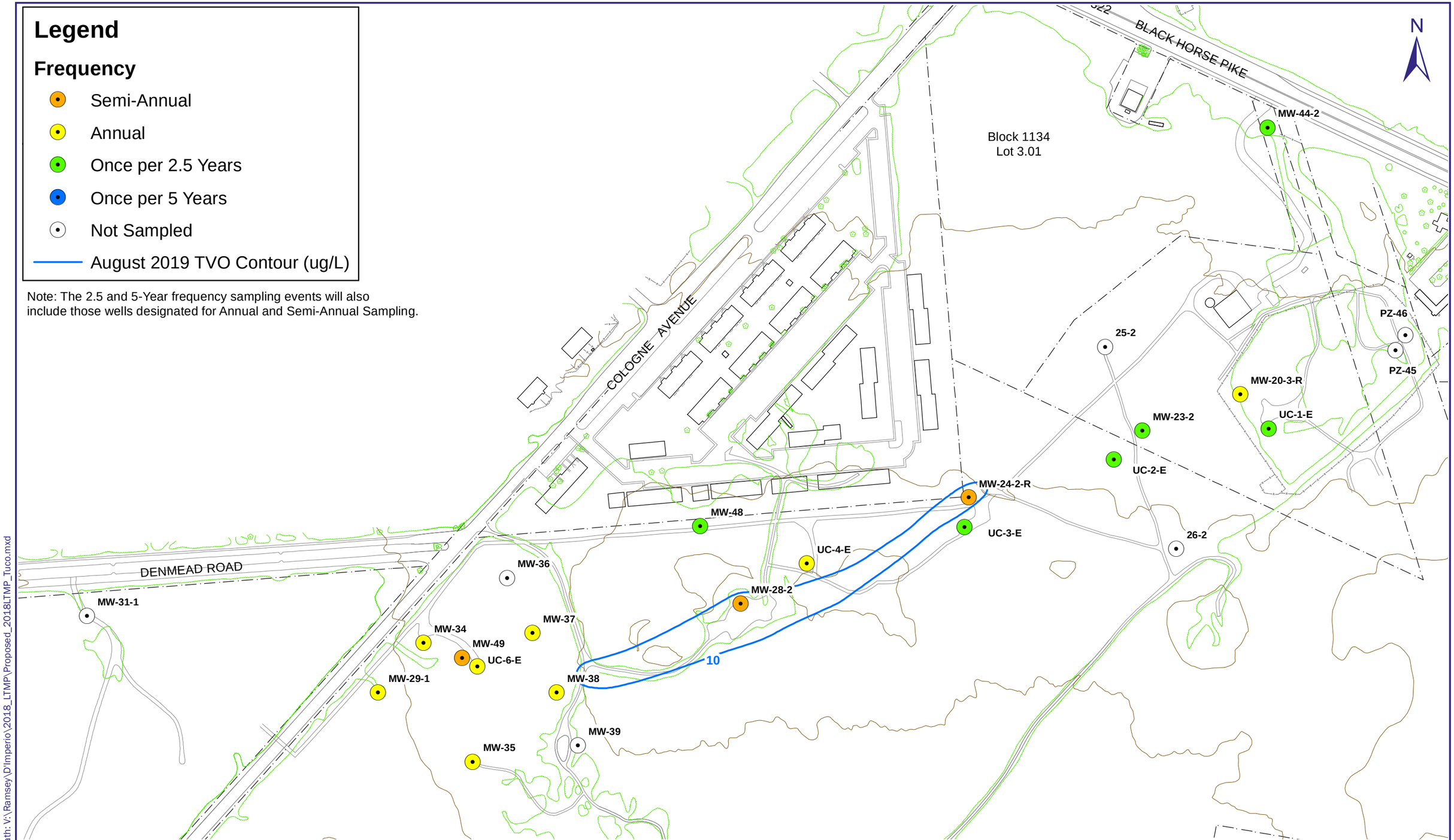
0 250 500
Feet

## Legend

### Frequency

- Semi-Annual
- Annual
- Once per 2.5 Years
- Once per 5 Years
- Not Sampled
- August 2019 TVO Contour (ug/L)

Note: The 2.5 and 5-Year frequency sampling events will also include those wells designated for Annual and Semi-Annual Sampling.




Author: CMeyn Path: V:\Ramsey\D'Imperio\2018_LTMP\Proposed_2018LTMP_Tuco.mxd

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**FIGURE 3-2**
**REVISED LTGMP WELL NETWORK - UPPER COHANSEY SAND AQUIFER**
**D'IMPERIO PROPERTY SITE, HAMILTON TWP, ATLANTIC CO. NEW JERSEY**

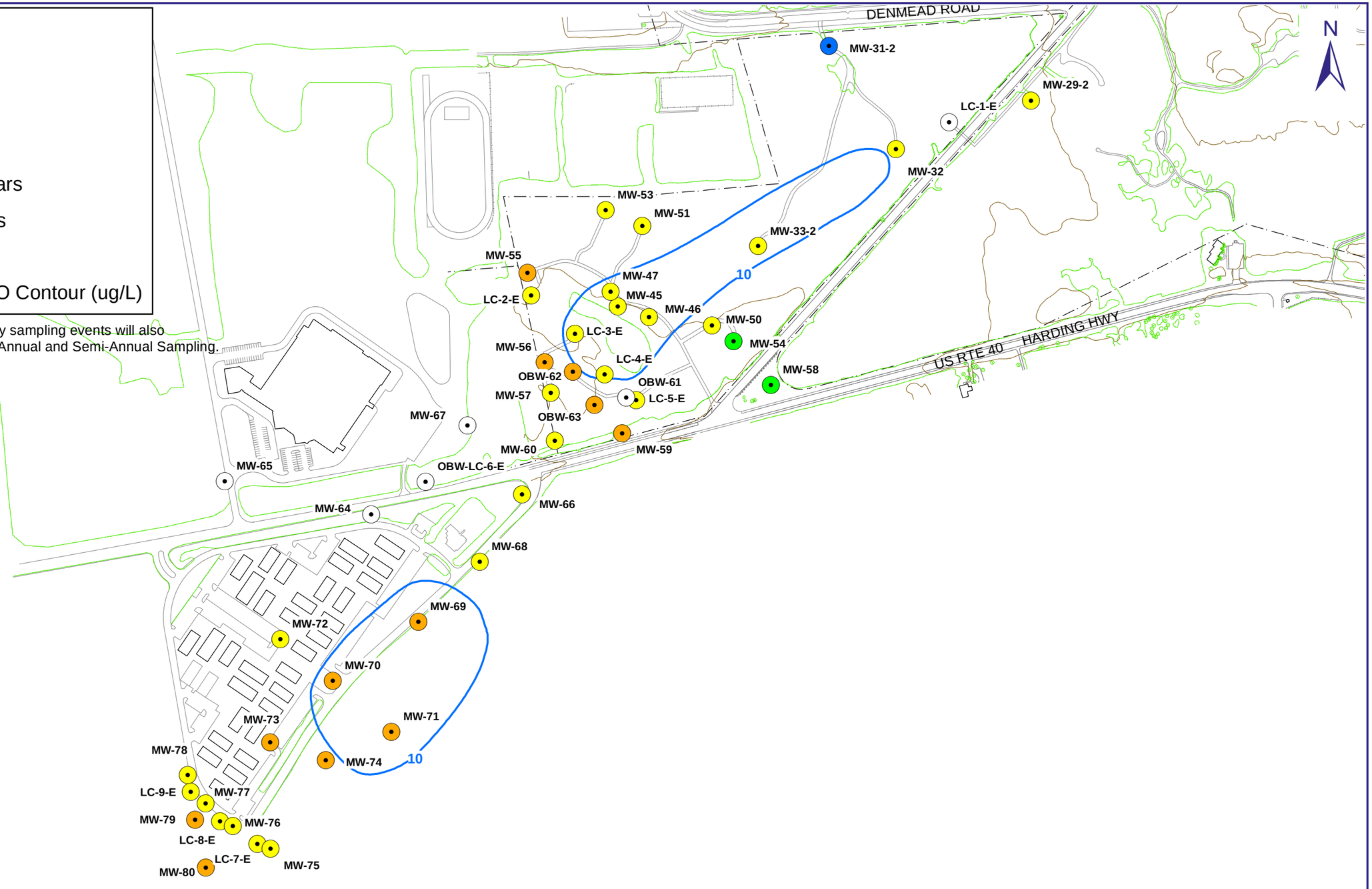
0 250 500
Feet

## Legend

### Frequency

- Semi-Annual
- Annual
- Once per 2.5 Years
- Once per 5 Years
- Not Sampled
- August 2019 TVO Contour (ug/L)

Note: The 2.5 and 5-Year frequency sampling events will also include those wells designated for Annual and Semi-Annual Sampling.




Author: CMeyn Path: V:\Ramsey\D'Imperio\2018_LTMP\Proposed_2018LTMP_TIco.mxd

Brown AND Caldwell

**FIGURE 3-3**
**REVISED LTGMP WELL NETWORK - LOWER COHANSEY SAND AQUIFER**
**D'IMPERIO PROPERTY SITE, HAMILTON TWP, ATLANTIC CO. NEW JERSEY**

0 400 800
Feet

# ATTACHMENT 2

## Field Data Sheets for Low-Flow Groundwater Sampling

**D'Imperio Property Site**
**Semi-Annual (1H-2022)**
**Groundwater Sampling Report**

**Brown AND Caldwell**

2 Park Way, Upper Saddle River, NJ 07458
Phone: (201) 574-4700 Fax: (201) 236-1607

**NJ FIELD LAB ID# 02023**

# LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: D'Imperio
Client: BC
Personnel: MHM / NK
Purge/Sample Depth:

Project Number:
Date: 03/07/22
Well ID: MW-79
Sample ID: MW-79-20220307

| Actual Time | Certified Parameters | | | | | ORP (mV) | DTW (ft) | Pumping Rate (mL/min) | Comments |
|---|---|---|---|---|---|---|---|---|---|
| | pH | Temp (°C) | Cond (mS/cm) | DO ( mg/L ) | Turbidity (NTU) | | | | |
| 1108 | 7.16 | 17.99 | 0.230 | 4.89 | 15.3 | 216 | 17.40 | 350 | |
| 1111 | 5.20 | 17.25 | 0.229 | 4.73 | 32.4 | 280 | 17.42 | | |
| 1114 | 4.66 | 16.84 | 0.232 | 4.39 | 242 | 295 | 17.44 | | |
| 1117 | 4.41 | 16.66 | 0.235 | 4.31 | 249 | 311 | 17.42 | | |
| 1120 | 4.33 | 16.56 | 0.233 | 4.20 | 214 | 311 | 17.45 | | |
| 1123 | 4.33 | 16.47 | 0.231 | 6.29 | 179 | 326 | 17.48 | | |
| 1126 | 4.38 | 16.49 | 0.231 | 5.95 | 145 | 333 | 17.48 | | |
| 1129 | 4.37 | 16.51 | 0.231 | 5.20 | 98.4 | 340 | 17.49 | | |
| 1132 | 4.39 | 16.45 | 0.233 | 5.59 | 50.1 | 351 | 17.50 | | |
| 1135 | 4.34 | 16.43 | 0.234 | 5.45 | 21.0 | 366 | 17.45 | | |
| 1138 | 4.26 | 16.99 | 0.233 | 5.26 | 14.2 | 371 | 17.48 | | |
| 1141 | 4.30 | 17.06 | 0.232 | 5.25 | 13.2 | 370 | 17.43 | | |
| 1144 | 4.34 | 17.03 | 0.232 | 5.26 | 12.9 | 369 | 17.40 | | |
| 1147 | 4.37 | 16.95 | 0.233 | 5.27 | 16.2 | 367 | 17.39 | | |
| 1150 | | | collect MW-79-20220307 + MS/MSD | | | | | | |

**Certified Sample Information:**
Time of Sample: 1150
Analyst Signature:

**Instrument Data:**
Manufacturer/Model: Horiba-U52
Serial No. Unit: 20UGYU45K
Serial No. Handheld: SWSHJD00
Calibration Date/Time: 03/07/22 1015

**Are low-flow parameters subject to field lab certification?** ☐ Yes ☒ No **(not required for CERCLA sites or sites outside of NJ)**

**If yes, low-flow data must be accompanied by a completed "Field Calibration Record, Horiba U-52" form or equivalent.**

**Brown AND Caldwell**

Upper Saddle River, NJ Office

# LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-79
Sample I.D.: MW-79-20220307

Project: D'Imperio
Personnel: MH/M / NK

Date: 03/07/22 Time: 1108
Weather: Sunny Air Temp.: 45°

## WELL DATA:

Casing Diameter: 6" ☐ Stainless Steel ☑ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☑ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 17.37 ft Bottom of Well: _____ ft
DATUM: ☐ Top of Protective Casing ☑ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☐ Yes ☑ No Is well clean to bottom? ☑ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☑ Yes ☐ No
Does Weep Hole adequately drain well head? ☐ Yes ☐ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☐ Yes ☐ No
Is Padlock Functional? ☐ Yes ☐ No ☐ NA Is Inner Casing Intact? ☑ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☑ Yes ☐ No
VOLUME OF WATER: Standing in well: _____ To be purged: _____

## PURGE DATA:

METHOD: ☐ Bailer, Size: ____ ☐ Bladder Pump ☑ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: Pump/Bailer: ☐ Teflon® ☑ Stainless Steel ☐ PVC ☐ Other: _____
Tubing/Rope: ☐ Teflon® ☑ Polyethylene ☐ Polypropylene ☐ Other: _____

Pumping Rate: 350 mL/min Elapsed Time: 39 min Volume Pumped: 4.8 gal
Was well Evacuated? ☐ Yes ☑ No Number of Well Volumes Removed: _____
PURGING EQUIPMENT: ☐ Dedicated ☑ Prepared Off-Site ☐ Field Cleaned

## SAMPLING DATA:

METHOD: ☐ Bailer, Size: ____ ☐ Bladder Pump ☑ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Syringe Sampler ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: Pump/Bailer: ☐ Teflon® ☑ Stainless Steel
Tubing/Rope: ☐ Teflon® ☑ Polyethylene
SAMPLING EQUIPMENT: ☐ Dedicated ☑ Prepared Off-Site ☐ Field Cleaned
Metals samples field filtered? ☐ Yes ☑ No Method: _____
APPEARANCE: ☑ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: See attached form for field parameter data.

DUP : ☑ No ☐ Yes Name: _____
MS/MSD : ☐ No ☑ Yes Name: MW-79-20220307

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: _____ Date: 03/07/22

**Brown AND Caldwell**

2 Park Way, Upper Saddle River, NJ 07458
Phone: (201) 574-4700 Fax: (201) 236-1607

## NJ FIELD LAB ID# 02023
## LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: ~~D'Imperio~~ D'Imperio
Client: BC
Personnel: MHM / MK
Purge/Sample Depth:

Project Number:
Date: 03/07/22
Well ID: MW-80
Sample ID: MW-80-20220307

| Actual Time | Certified Parameters | | | | | ORP (mV) | DTW (ft) | Pumping Rate (mL/min) | Comments |
|---|---|---|---|---|---|---|---|---|---|
| | pH | Temp (°C) | Cond (mS/cm) | DO ( mg/L ) | Turbidity (NTU) | | | | |
| 12:22 | 5.31 | 12.15 | 0.090 | 4.97 | 14.7 | 260 | 13.13 | 350 | |
| 12:25 | 5.16 | 16.10 | 0.084 | 3.49 | 99.8 | 258 | 13.13 | | |
| 12:28 | 5.06 | 15.87 | 0.081 | 3.27 | 225 | 236 | 13.14 | | |
| 12:31 | 5.06 | 15.79 | 0.081 | 3.22 | 202 | 234 | 13.16 | | |
| 12:34 | 5.02 | 15.83 | 0.080 | 3.17 | 213 | 232 | 13.16 | | |
| 12:37 | 5.02 | 15.81 | 0.079 | 3.18 | 207 | 236 | 13.17 | | |
| 12:40 | 5.02 | 15.84 | 0.078 | 3.22 | 193 | 243 | 13.16 | | |
| 12:43 | 5.02 | 15.85 | 0.076 | 3.28 | 161 | 249 | 13.18 | | |
| 12:46 | 5.06 | 15.83 | 0.073 | 3.41 | 128 | 254 | 13.18 | | |
| 12:49 | 5.05 | 15.82 | 0.071 | 3.45 | 118 | 260 | 13.17 | | |
| 12:52 | 5.01 | 15.82 | 0.070 | 3.70 | 93.3 | 272 | 13.18 | | |
| 12:55 | 4.98 | 15.88 | 0.069 | 3.69 | 89.3 | 275 | 13.17 | | |
| 12:58 | 4.94 | 15.79 | 0.070 | 3.68 | 69.0 | 282 | 13.17 | | |
| 13:01 | 4.93 | 15.81 | 0.070 | 3.67 | 64.4 | 284 | 13.14 | | |
| 13:04 | 4.95 | 15.77 | 0.072 | 3.62 | 53.3 | 289 | 13.15 | | |
| 13:07 | 4.92 | 15.82 | 0.073 | 3.59 | 47.0 | 290 | 13.14 | | |
| 13:10 | 4.94 | 15.83 | 0.074 | 3.57 | 43.5 | 290 | 13.15 | | |
| 13:13 | Collect MW-80-20220307 | | | | | | | | |

**Certified Sample Information:**
Time of Sample: 13:13
Analyst Signature:

**Instrument Data:**
Manufacturer/Model: Horiba-U52
Serial No. Unit: 20UGYU5K
Serial No. Handheld: SW5HSDOO
Calibration Date/Time: 03/07/22 13:13

Are low-flow parameters subject to field lab certification? ☐ Yes ☑ No (not required for CERCLA sites or sites outside of NJ)

If yes, low-flow data must be accompanied by a completed "Field Calibration Record, Horiba U-52" form or equivalent.

Brown AND Caldwell

Upper Saddle River, NJ Office

# LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-80
Sample I.D.: MW-80-20220307

Project: ~~D'Imperio~~ D'Imperio
Personnel: MHm/MK

Date: 03/07/22 Time: 1222
Weather: Sunny Air Temp.: 74

## WELL DATA:

Casing Diameter: 6" ❑ Stainless Steel ☑ Steel ❑ PVC ❑ Teflon® ❑ Other: _____
Intake Diameter: 2" ❑ Stainless Steel ❑ Galv. Steel ☑ PVC ❑ Teflon® ❑ Open rock
DEPTH TO : Static Water Level: 13.11 ft Bottom of Well: _____ ft
DATUM: ❑ Top of Protective Casing ☑ Top of Well Casing ❑ Other:
CONDITION: Is Well clearly labeled? ❑ Yes ☑ No Is well clean to bottom? ☑ Yes ❑ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☑ Yes ❑ No
Does Weep Hole adequately drain well head? ☑ Yes ❑ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☑ Yes ❑ No
Is Padlock Functional? ❑ Yes ❑ No ☑ NA Is Inner Casing Intact? ❑ Yes ❑ No
Is Inner Casing Properly Capped and Vented? ☑ Yes ❑ No
VOLUME OF WATER: Standing in well: — To be purged: —

## PURGE DATA:

METHOD: ❑ Bailer, Size: ____ ❑ Bladder Pump ☑ 2" Submersible Pump ❑ 4" Submersible Pump
❑ Centrifugal Pump ❑ Peristaltic Pump ❑ Inertial Lift Pump ❑ Other: _____

MATERIALS: (Pump/Bailer): ❑ Teflon® ☑ Stainless Steel ❑ PVC ❑ Other: _____
(Tubing/Rope): ❑ Teflon® ☑ Polyethylene ❑ Polypropylene ❑ Other: _____

Pumping Rate: 350 Elapsed Time: 48 min Volume Pumped: 5.0 gal
Was well Evacuated? ❑ Yes ☑ No Number of Well Volumes Removed: —
PURGING EQUIPMENT: ❑ Dedicated ☑ Prepared Off-Site ☑ Field Cleaned

## SAMPLING DATA:

METHOD: ❑ Bailer, Size: ____ ❑ Bladder Pump ☑ 2" Submersible Pump ❑ 4" Submersible Pump
❑ Syringe Sampler ❑ Peristaltic Pump ❑ Inertial Lift Pump ❑ Other: _____

MATERIALS: (Pump/Bailer): ❑ Teflon® ☑ Stainless Steel
(Tubing/Rope): ❑ Teflon® ❑ Polyethylene

SAMPLING EQUIPMENT: ❑ Dedicated ❑ Prepared Off-Site ☑ Field Cleaned
Metals samples field filtered? ❑ Yes ☑ No Method: _____
APPEARANCE: ☑ Clear ❑ Turbid ❑ Color: _____ ❑ Contains Immiscible Liquid
FIELD DETERMINATIONS: See attached form for field parameter data.

DUP : ☑ No ❑ Yes Name: _____
MS/MSD : ☑ No ❑ Yes Name: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: _____ Date: 03/07/22

**Brown AND Caldwell**

2 Park Way, Upper Saddle River, NJ 07458
Phone: (201) 574-4700 Fax: (201) 236-1607

## NJ FIELD LAB ID# 02023
## LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: D'Imports
Client: BC
Personnel: MHM / NK
Purge/Sample Depth:

Project Number:
Date: 03/07/22
Well ID: MW-74
Sample ID: MW-74-20220307

| Actual Time | Certified Parameters | | | | | ORP (mV) | DTW (ft) | Pumping Rate (mL/min) | Comments |
|---|---|---|---|---|---|---|---|---|---|
| | pH | Temp (°C) | Cond (mS/cm) | DO ( mg/L ) | Turbidity (NTU) | | | | |
| ~~1442~~ | ~~16.44~~ | | | | | | | | NK |
| 1442 | 5.52 | 16.28 | 0.060 | 6.55 | 18.8 | 277 | 22.06 | 200 | |
| 1445 | 5.52 | 18.52 | 0.060 | 5.80 | 13.4 | 298 | 22.06 | | |
| 1448 | 5.28 | 18.74 | 0.059 | 5.61 | 7.2 | 347 | 22.04 | | |
| 1451 | 5.32 | 18.85 | 0.059 | 5.14 | 8.3 | 144 | 22.04 | | |
| 1454 | 5.71 | 18.89 | 0.062 | 4.72 | 19.5 | 41 | 22.07 | | |
| 1457 | 6.30 | 19.01 | 0.070 | 4.75 | 24.5 | 34 | 22.07 | | |
| 1500 | 6.20 | 19.15 | 0.111 | 5.23 | 44.6 | 48 | 22.08 | | |
| 1503 | 7.62 | 15.61 | 0.121 | 5.50 | 172 | 82 | 22.06 | | |
| 1506 | 6.99 | 15.40 | 0.103 | 5.42 | 98.3 | 108 | 22.05 | | |
| 1509 | 6.57 | 15.47 | 0.092 | 5.72 | 61.5 | 125 | 22.08 | | |
| 1512 | 6.14 | 15.50 | 0.084 | 5.48 | 65.7 | 146 | 22.08 | | |
| 1515 | 5.81 | 15.57 | 0.078 | 5.49 | 53.3 | 164 | 22.07 | | |
| 1518 | 5.62 | 15.60 | 0.075 | 5.50 | 40.8 | 180 | 22.08 | | |
| 1521 | 5.46 | 15.64 | 0.071 | 5.53 | 25.5 | 202 | 22.07 | | |
| 1524 | 5.43 | 15.65 | 0.070 | 5.51 | 20.1 | 213 | 22.07 | | |
| 1527 | 5.35 | 15.70 | 0.069 | 5.49 | 14.7 | 223 | 22.07 | | |
| 1530 | 5.34 | 15.67 | 0.069 | 5.44 | 13.0 | 226 | 22.07 | | |
| 1533 | Collect | MW-74-20220307 | | | | | | | |

**Certified Sample Information:**
Time of Sample: 1533
Analyst Signature:

**Instrument Data:**
Manufacturer/Model: Horiba-U52
Serial No. Unit: 20UGYU5K
Serial No. Handheld: SWSHSD00
Calibration Date/Time: 03/07/22

**Are low-flow parameters subject to field lab certification? ☐ Yes ☐ No (not required for CERCLA sites or sites outside of NJ)**

**If yes, low-flow data must be accompanied by a completed "Field Calibration Record, Horiba U-52" form or equivalent.**

Brown AND Caldwell

Upper Saddle River, NJ Office

# LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-74
Sample I.D.: MW-74-20220307

Project: D'Imparts
Personnel: MHm / MK

Date: 03/07/22 Time: 1442
Weather: Sunny Air Temp.: 74

## WELL DATA:

Casing Diameter: 6" ❑ Stainless Steel ☑ Steel ❑ PVC ❑ Teflon® ❑ Other: _____
Intake Diameter: 2" ❑ Stainless Steel ❑ Galv. Steel ☑ PVC ❑ Teflon® ❑ Open rock
DEPTH TO : Static Water Level: 22.02 ft Bottom of Well: _____ ft
DATUM: ❑ Top of Protective Casing ☑ Top of Well Casing ❑ Other:
CONDITION: Is Well clearly labeled? ❑ Yes ☑ No Is well clean to bottom? ☑ Yes ❑ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☑ Yes ❑ No
Does Weep Hole adequately drain well head? ☑ Yes ❑ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☑ Yes ❑ No
Is Padlock Functional? ❑ Yes ❑ No ☑ NA Is Inner Casing Intact? ❑ Yes ❑ No
Is Inner Casing Properly Capped and Vented? ☑ Yes ❑ No
VOLUME OF WATER: Standing in well: _____ To be purged: _____

## PURGE DATA:

METHOD: ❑ Bailer, Size: ____ ❑ Bladder Pump ☑ 2" Submersible Pump ❑ 4" Submersible Pump
❑ Centrifugal Pump ❑ Peristaltic Pump ❑ Inertial Lift Pump ❑ Other: _____

MATERIALS: Pump/Bailer: ❑ Teflon® ☑ Stainless Steel ❑ PVC ❑ Other: _____
Tubing/Rope: ❑ Teflon® ☑ Polyethylene ❑ Polypropylene ❑ Other: _____

Pumping Rate: 200 mL/min Elapsed Time: 118 min Volume Pumped: 3.2 gal
Was well Evacuated? ❑ Yes ☑ No Number of Well Volumes Removed: _____
PURGING EQUIPMENT: ❑ Dedicated ❑ Prepared Off-Site ☑ Field Cleaned

## SAMPLING DATA:

METHOD: ❑ Bailer, Size: ____ ❑ Bladder Pump ☑ 2" Submersible Pump ❑ 4" Submersible Pump
❑ Syringe Sampler ❑ Peristaltic Pump ❑ Inertial Lift Pump ❑ Other: _____

MATERIALS: Pump/Bailer: ❑ Teflon® ☑ Stainless Steel
Tubing/Rope: ❑ Teflon® ❑ Polyethylene

SAMPLING EQUIPMENT: ❑ Dedicated ❑ Prepared Off-Site ☑ Field Cleaned
Metals samples field filtered? ❑ Yes ☑ No Method: _____
APPEARANCE: ☑ Clear ❑ Turbid ❑ Color: _____ ❑ Contains Immiscible Liquid
FIELD DETERMINATIONS: See attached form for field parameter data.

DUP : ☑ No ❑ Yes Name: _____
MS/MSD: ☑ No ❑ Yes Name: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: _____ Date: 03/07/22

**Brown AND Caldwell**

2 Park Way, Upper Saddle River, NJ 07458
Phone: (201) 574-4700 Fax: (201) 236-1607

## NJ FIELD LAB ID# 02023
## LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: D' Imperia
Client: BC
Personnel: MHM / KK
Purge/Sample Depth:

Project Number:
Date: 03/08/22
Well ID: MW-41
Sample ID: MW-41-20220308

| Actual Time | Certified Parameters | | | | | ORP (mV) | DTW (ft) | Pumping Rate (mL/min) | Comments |
|---|---|---|---|---|---|---|---|---|---|
| | pH | Temp (°C) | Cond (mS/cm) | DO ( mg/L ) | Turbidity (NTU) | | | | |
| 919 | 5.29 | 12.94 | 0.049 | 5.14 | 28.4 | 269 | 32.62 | 200 | |
| 922 | 5.23 | 13.12 | 0.057 | 3.49 | 16.6 | 335 | 32.60 | | |
| 925 | 4.83 | 12.36 | 0.060 | 2.68 | 14.5 | 345 | 32.60 | | |
| 928 | 4.75 | 12.71 | 0.058 | 2.09 | 10.6 | 340 | 32.60 | | |
| 931 | 4.64 | 12.65 | 0.058 | 2.32 | 7.1 | 330 | 32.61 | | |
| 934 | 4.32 | 12.01 | 0.051 | 3.22 | 15.8 | 363 | 32.63 | | Fixed flow rate |
| 937 | 4.33 | 17.24 | 0.053 | 2.55 | 15.0 | 377 | 32.63 | | |
| 940 | 4.17 | 17.21 | 0.045 | 8.89 | 26.5 | 363 | 32.62 | | |
| 943 | 4.37 | 16.30 | 0.046 | 9.59 | 26.1 | 356 | 32.62 | | |
| 946 | 4.18 | 17.24 | 0.049 | 8.63 | 10.4 | 352 | 32.62 | | |
| 949 | 4.15 | 16.82 | 0.049 | 8.71 | 7.6 | 387 | 32.61 | | |
| 952 | 4.21 | 16.83 | 0.049 | 8.62 | 7.5 | 382 | 32.62 | | |
| 955 | 4.26 | 16.84 | 0.049 | 8.60 | 7.2 | 379 | 32.62 | | |
| 958 | 4.33 | 16.96 | 0.049 | 8.49 | 6.2 | 374 | 32.62 | | |
| 1001 | | Collected | MW | -41 - | 20220308 | | | | |

NK

**Certified Sample Information:**
Time of Sample: 1001
Analyst Signature:

**Instrument Data:**
Manufacturer/Model: Horiba-U52
Serial No. Unit: 24UEYC15K
Serial No. Handheld: SWSHSDOO
Calibration Date/Time: 03/08/22

**Are low-flow parameters subject to field lab certification? ☐ Yes ☑ No (not required for CERCLA sites or sites outside of NJ)**

**If yes, low-flow data must be accompanied by a completed "Field Calibration Record, Horiba U-52" form or equivalent.**

**Brown AND Caldwell**

Upper Saddle River, NJ Office

# LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-41
Sample I.D.: MW-41-20220328

Project: ~~D'Imperio~~ D'Imperio
Personnel: MH.MJ.VK

Date: 03/28/22 Time: 0919
Weather: Cloudy Air Temp.: 43

## WELL DATA:

Casing Diameter: 6" ☐ Stainless Steel ☑ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☑ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 32.65 ft Bottom of Well: _____ ft
DATUM: ☐ Top of Protective Casing ☑ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☐ Yes ☑ No Is well clean to bottom? ☑ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☑ Yes ☐ No
Does Weep Hole adequately drain well head? ☑ Yes ☐ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☑ Yes ☐ No
Is Padlock Functional? ☐ Yes ☐ No ☑ NA Is Inner Casing Intact? ☐ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☐ Yes ☐ No
VOLUME OF WATER: Standing in well: _____ To be purged: _____

## PURGE DATA:

METHOD: ☐ Bailer, Size: ____ ☐ Bladder Pump ☑ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: (Pump/Bailer): ☐ Teflon® ☑ Stainless Steel ☐ PVC ☐ Other: _____
(Tubing/Rope): ☐ Teflon® ☑ Polyethylene ☐ Polypropylene ☐ Other: _____

Pumping Rate: 200 mL/min Elapsed Time: 39 min Volume Pumped: 2.69 gal
Was well Evacuated? ☐ Yes ☐ No Number of Well Volumes Removed: _____
PURGING EQUIPMENT: ☐ Dedicated ~~☑ Prepared Off-Site~~ ☑ Field Cleaned

## SAMPLING DATA:

METHOD: ☐ Bailer, Size: ____ ☐ Bladder Pump ☑ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Syringe Sampler ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: (Pump/Bailer): ☐ Teflon® ☑ Stainless Steel
(Tubing/Rope): ☐ Teflon® ☑ Polyethylene

SAMPLING EQUIPMENT: ☐ Dedicated ☑ Prepared Off-Site ☐ Field Cleaned
Metals samples field filtered? ☐ Yes ☑ No Method: _____
APPEARANCE: ☑ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: See attached form for field parameter data.

DUP : ☑ No ☐ Yes Name: _____
MS/MSD : ☑ No ☐ Yes Name: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: _____ Date: 03/28/22

**Brown AND Caldwell**

2 Park Way, Upper Saddle River, NJ 07458
Phone: (201) 574-4700 Fax: (201) 236-1607

## NJ FIELD LAB ID# 02023
## LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: D'Imperio
Client: BC
Personnel: MH/MK
Purge/Sample Depth:

Project Number:
Date: 03/08/22
Well ID: MW-24-1
Sample ID: MW-24-1-20220308

| Actual Time | Certified Parameters | | | | | ORP (mV) | DTW (ft) | Pumping Rate (mL/min) | Comments |
|---|---|---|---|---|---|---|---|---|---|
| | pH | Temp (°C) | Cond (mS/cm) | DO (mg/L) | Turbidity (NTU) | | | | |
| 1019 | ~~13.526~~ | 13.65 | 0.062 | 5.02 | 113 | 237 | 24.00 | 225 | |
| 1022 | 5.24 | 14.18 | 0.058 | 3.56 | 81.3 | 241 | 23.82 | | |
| 1025 | 5.11 | 14.96 | 0.056 | 3.17 | 46.7 | 254 | 23.82 | | |
| 1028 | 5.13 | 14.95 | 0.056 | 2.75 | 44.4 | 255 | 23.82 | | |
| 1031 | 5.05 | 14.64 | 0.056 | 2.71 | 42.0 | 255 | 23.80 | | |
| 1034 | 4.93 | 15.60 | 0.053 | 2.40 | 44.6 | 266 | 23.85 | | |
| 1037 | 5.13 | 17.22 | 0.054 | 2.67 | 26.7 | 267 | 23.85 | | |
| 1040 | 5.12 | 17.11 | 0.054 | 2.75 | 23.4 | 269 | 23.23 | | |
| 1043 | 5.13 | 16.98 | 0.053 | 2.60 | 19.3 | 270 | 23.85 | | |
| 1046 | 5.02 | 15.70 | 0.051 | 3.43 | 11.3 | 291 | 23.85 | | |
| 1049 | 5.11 | 13.78 | 0.049 | 3.67 | 21.2 | 285 | 23.34 | | Fixed flow rate |
| 1052 | 5.12 | 17.78 | 0.050 | 3.47 | 19.3 | 288 | 23.87 | | |
| 1055 | | collected MW-24-1-20220308 | | | | | | | |

**Certified Sample Information:**
Time of Sample: 1055
Analyst Signature:

**Instrument Data:**
Manufacturer/Model: Horiba-U52
Serial No. Unit: 20UGYU5K
Serial No. Handheld: SWSHS1D00
Calibration Date/Time: 03/08/22

**Are low-flow parameters subject to field lab certification? ☐ Yes ☐ No (not required for CERCLA sites or sites outside of NJ)**

**If yes, low-flow data must be accompanied by a completed "Field Calibration Record, Horiba U-52" form or equivalent.**

Brown AND Caldwell

Upper Saddle River, NJ Office

# LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-21-1-~~20220302~~

Sample I.D.: MW-21-1-20220302

Project: D'Imperio

Personnel: MHM/NK

Date: 03/06/22 Time: 1019

Weather: Cloudy Air Temp.: 43

## WELL DATA:

Casing Diameter: 6" ❑ Stainless Steel ☑ Steel ❑ PVC ❑ Teflon® ❑ Other: _____

Intake Diameter: 2" ❑ Stainless Steel ❑ Galv. Steel ☑ PVC ❑ Teflon® ❑ Open rock

DEPTH TO : Static Water Level: 23.18 ft Bottom of Well: _____ ft

DATUM: ❑ Top of Protective Casing ☑ Top of Well Casing ❑ Other:

CONDITION: Is Well clearly labeled? ❑ Yes ☑ No Is well clean to bottom? ☑ Yes ❑ No

Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☑ Yes ❑ No

Does Weep Hole adequately drain well head? ☑ Yes ❑ No

Is Concrete Pad Intact? (not cracked or frost heaved) ☑ Yes ❑ No

Is Padlock Functional? ❑ Yes ❑ No ☑ NA Is Inner Casing Intact? ❑ Yes ❑ No

Is Inner Casing Properly Capped and Vented? ☑ Yes ❑ No

VOLUME OF WATER: Standing in well: ~~_____~~ To be purged: ~~_____~~

## PURGE DATA:

METHOD: ❑ Bailer, Size: ____ ❑ Bladder Pump ☑ 2" Submersible Pump ❑ 4" Submersible Pump ❑ Centrifugal Pump ❑ Peristaltic Pump ❑ Inertial Lift Pump ❑ Other: _____

MATERIALS: Pump/Bailer: ❑ Teflon® ☑ Stainless Steel ❑ PVC ❑ Other: _____

Tubing/Rope: ❑ Teflon® ☑ Polyethylene ❑ Polypropylene ❑ Other: _____

Pumping Rate: 225 Elapsed Time: 33 min Volume Pumped: 2.49 gal

Was well Evacuated? ❑ Yes ☑ No Number of ~~Well Volumes~~ Removed: _____

PURGING EQUIPMENT: ❑ Dedicated ☑ ~~Prepared Off-Site~~ ☑ Field Cleaned

## SAMPLING DATA:

METHOD: ❑ Bailer, Size: ____ ❑ Bladder Pump ☑ 2" Submersible Pump ❑ 4" Submersible Pump ❑ Syringe Sampler ❑ Peristaltic Pump ❑ Inertial Lift Pump ❑ Other: _____

MATERIALS: Pump/Bailer: ❑ Teflon® ☑ Stainless Steel

Tubing/Rope: ❑ Teflon® ☑ Polyethylene

SAMPLING EQUIPMENT: ❑ Dedicated ☑ ~~Prepared Off-Site~~ ☑ Field Cleaned

Metals samples field filtered? ❑ Yes ☑ No Method: _____

APPEARANCE: ☑ Clear ❑ Turbid ❑ Color: _____ ❑ Contains Immiscible Liquid

FIELD DETERMINATIONS: See attached form for field parameter data.

DUP : ☑ No ❑ Yes Name: _____

MS/MSD : ☑ No ❑ Yes Name: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: _____ Date: 03/06/22

**Brown AND Caldwell**

2 Park Way, Upper Saddle River, NJ 07458
Phone: (201) 574-4700 Fax: (201) 236-1607

## NJ FIELD LAB ID# 02023
## LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: D'Imperio
Client: BC
Personnel: MH/MK
Purge/Sample Depth:

Project Number:
Date: 03/08/22
Well ID: MW-49
Sample ID: MW-49-20220308

| Actual Time | Certified Parameters | | | | | ORP (mV) | DTW (ft) | Pumping Rate (mL/min) | Comments |
|---|---|---|---|---|---|---|---|---|---|
| | pH | Temp (°C) | Cond (mS/cm) | DO ( mg/L ) | Turbidity (NTU) | | | | |
| 1221 | 5.50 | 12.54 | 0.209 | 4.96 | 33.6 | 289 | 22.21 | 350 | |
| 1224 | 5.22 | 12.53 | 0.540 | 3.41 | 241 | 307 | 22.20 | | |
| 1227 | 5.25 | 12.70 | 0.637 | 3.36 | 220 | 289 | 22.20 | | |
| 1230 | 5.30 | 13.05 | 0.672 | 3.29 | 149 | 281 | 22.20 | | |
| 1233 | 5.32 | 13.33 | 0.624 | 3.20 | 125 | 281 | 22.20 | | |
| 1236 | 5.34 | 13.54 | 0.680 | 3.14 | 98.3 | 282 | 22.20 | | |
| 1239 | 5.33 | 13.65 | 0.665 | 3.00 | 78.7 | 285 | 22.20 | | |
| 1242 | 5.33 | 13.72 | 0.640 | 2.97 | 61.6 | 287 | 22.20 | | |
| 1245 | 5.33 | 13.77 | 0.621 | 2.91 | 52.1 | 290 | 22.19 | | |
| 1248 | 5.32 | 13.87 | 0.599 | 2.89 | 42.9 | 295 | 22.19 | | |
| 1251 | 5.32 | 13.92 | 0.570 | 2.94 | 35.6 | 297 | 22.19 | | |
| 1254 | Collect sample MW-49-20220308 | | | | | | | | |

**Certified Sample Information:**
Time of Sample: 1254
Analyst Signature:

**Instrument Data:**
Manufacturer/Model: Horiba-U52
Serial No. Unit: 20UGYU5K
Serial No. Handheld: SWSHSDQQ
Calibration Date/Time: 03/08/22

**Are low-flow parameters subject to field lab certification? ☐ Yes ☐ No (not required for CERCLA sites or sites outside of NJ)**

**If yes, low-flow data must be accompanied by a completed "Field Calibration Record, Horiba U-52" form or equivalent.**

Brown AND Caldwell

Upper Saddle River, NJ Office

# LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-49
Sample I.D.: MW-49-20220308

Project: D'Imperio
Personnel: MHM/LL

Date: 03/22/22 Time: 1221
Weather: Cloudy Air Temp.: 50

## WELL DATA:

Casing Diameter: 6" ☐ Stainless Steel ☑ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☑ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 22.18 ft Bottom of Well: _____ ft
DATUM: ☐ Top of Protective Casing ☑ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☐ Yes ☑ No Is well clean to bottom? ☑ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☑ Yes ☐ No
Does Weep Hole adequately drain well head? ☑ Yes ☐ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☑ Yes ☐ No
Is Padlock Functional? ☐ Yes ☐ No ☑ NA Is Inner Casing Intact? ☐ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☑ Yes ☐ No
VOLUME OF WATER: Standing in well: _____ To be purged: _____

## PURGE DATA:

METHOD: ☐ Bailer, Size: ____ ☐ Bladder Pump ☑ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: (Pump)/Bailer: ☐ Teflon® ☑ Stainless Steel ☐ PVC ☐ Other: _____
(Tubing)/Rope: ☐ Teflon® ☑ Polyethylene ☐ Polypropylene ☐ Other: _____

Pumping Rate: 350 Elapsed Time: 30 min Volume Pumped: 3.5 gal
Was well Evacuated? ☐ Yes ☑ No Number of Well Volumes Removed: _____
PURGING EQUIPMENT: ☐ Dedicated ☑ Prepared Off-Site ☐ Field Cleaned

## SAMPLING DATA:

METHOD: ☐ Bailer, Size: ____ ☐ Bladder Pump ☑ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Syringe Sampler ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: (Pump)/Bailer: ☐ Teflon® ☑ Stainless Steel
(Tubing)/Rope: ☐ Teflon® ☑ Polyethylene

SAMPLING EQUIPMENT: ☐ Dedicated ☑ Prepared Off-Site ☐ Field Cleaned
Metals samples field filtered? ☐ Yes ☐ No Method: _____
APPEARANCE: ☑ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: See attached form for field parameter data.

DUP : ☑ No ☐ Yes Name: _____
MS/MSD : ☑ No ☐ Yes Name: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: [signature] Date: 03/22/22

**Brown AND Caldwell**

2 Park Way, Upper Saddle River, NJ 07458
Phone: (201) 574-4700 Fax: (201) 236-1607

**NJ FIELD LAB ID# 02023**
**LOW-FLOW GROUNDWATER FIELD DATA SHEET**

Project Name: D'Imperio
Client: BC
Personnel: MHM/MK
Purge/Sample Depth:

Project Number:
Date: 03/08/22
Well ID: MW-56
Sample ID: MW-56-20220308

| Actual Time | Certified Parameters | | | | | ORP (mV) | DTW (ft) | Pumping Rate (mL/min) | Comments |
|---|---|---|---|---|---|---|---|---|---|
| | pH | Temp (°C) | Cond (mS/cm) | DO ( mg/L ) | Turbidity (NTU) | | | | |
| 1318 | 6.29 | 12.76 | 0.142 | 8.80 | 6.5 | 256 | 16.39 | 200 | |
| 1321 | 6.28 | 12.83 | 0.150 | 3.65 | 7.2 | 257 | 16.37 | | |
| 1324 | 6.30 | 12.84 | 0.149 | 3.56 | 5.8 | 257 | 16.35 | | |
| 1327 | 6.32 | 12.85 | 0.150 | 3.56 | 5.2 | 255 | 16.35 | | |
| 1330 | 6.34 | 12.87 | 0.150 | 3.39 | 5.7 | 247 | 16.35 | | |
| 1333 | 6.35 | 12.88 | 0.151 | 3.22 | 7.7 | 242 | 16.35 | | |
| 1336 | 6.36 | 12.90 | 0.150 | 3.24 | 13.0 | 237 | 16.35 | | |
| 1339 | 6.36 | 12.97 | 0.146 | 3.14 | 32.0 | 226 | 16.35 | | |
| 1342 | 6.36 | 12.97 | 0.139 | 3.15 | 42.1 | 221 | 16.35 | | |
| 1345 | 6.32 | 12.97 | 0.136 | 3.10 | 43.5 | 218 | 16.35 | | |
| 1348 | 6.28 | 12.99 | 0.132 | 3.03 | 32.2 | 211 | 16.35 | | |
| 1351 | | Collect | sample | MW-56-20220308 | | | | | |

**Certified Sample Information:**
Time of Sample: 1351

Analyst Signature:

**Instrument Data:**
Manufacturer/Model: Horiba-U52
Serial No. Unit: 20UGYU5K
Serial No. Handheld: SWSHSDQO
Calibration Date/Time: 03/08/22

**Are low-flow parameters subject to field lab certification? ☐ Yes ☐ No (not required for CERCLA sites or sites outside of NJ)**

**If yes, low-flow data must be accompanied by a completed "Field Calibration Record, Horiba U-52" form or equivalent.**

**Brown AND Caldwell**

Upper Saddle River, NJ Office

# LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-56
Sample I.D.: MW-56-20220308

Project: D'Imperio
Personnel:

Date: 03/08/22 Time: _____
Weather: Sunny Air Temp.: 54

## WELL DATA:

Casing Diameter: 6" ☐ Stainless Steel ☑ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☑ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 16.26 ft Bottom of Well: _____ ft
DATUM: ☐ Top of Protective Casing ☑ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☐ Yes ☑ No Is well clean to bottom? ☑ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☑ Yes ☐ No
Does Weep Hole adequately drain well head? ☑ Yes ☐ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☑ Yes ☐ No
Is Padlock Functional? ☐ Yes ☐ No ☑ NA Is Inner Casing Intact? ☐ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☑ Yes ☐ No
VOLUME OF WATER: Standing in well: _____ To be purged: _____

## PURGE DATA:

METHOD: ☐ Bailer, Size: ____ ☐ Bladder Pump ☑ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: (Pump)/Bailer: ☐ Teflon® ☑ Stainless Steel ☐ PVC ☐ Other: _____
(Tubing)/Rope: ☐ Teflon® ☑ Polyethylene ☐ Polypropylene ☐ Other: _____

Pumping Rate: 200 Elapsed Time: 30 min Volume Pumped: 2.25 gal
Was well Evacuated? ☐ Yes ☑ No Number of Well Volumes Removed: _____
PURGING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

## SAMPLING DATA:

METHOD: ☐ Bailer, Size: ____ ☐ Bladder Pump ☑ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Syringe Sampler ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: (Pump)/Bailer: ☐ Teflon® ☑ Stainless Steel
(Tubing)/Rope: ☐ Teflon® ☑ Polyethylene

SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned
Metals samples field filtered? ☐ Yes ☑ No Method: _____
APPEARANCE: ☑ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: See attached form for field parameter data.

DUP : ☑ No ☐ Yes Name: _____
MS/MSD : ☑ No ☐ Yes Name: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: _____ Date: 03/08/22

**Brown AND Caldwell**

2 Park Way, Upper Saddle River, NJ 07458
Phone: (201) 574-4700 Fax: (201) 236-1607

## NJ FIELD LAB ID# 02023
## LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: D'Imperio
Client: BC
Personnel: MHM/MK
Purge/Sample Depth:

Project Number:
Date: 03/08/22
Well ID: ~~MW~~ OBW-62
Sample ID: OBW-62-20220308

| Actual Time | Certified Parameters | | | | | ORP (mV) | DTW (ft) | Pumping Rate (mL/min) | Comments |
|---|---|---|---|---|---|---|---|---|---|
| | pH | Temp (°C) | Cond (mS/cm) | DO ( mg/L ) | Turbidity (NTU) | | | | |
| 1402 | 6.22 | 12.44 | 0.059 | 4.79 | 6.8 | 240 | 15.98 | 200 | |
| 1411 | 5.46 | 12.67 | 0.059 | 3.95 | 6.6 | 226 | 15.98 | | |
| 1414 | 5.29 | 12.57 | 0.057 | 3.07 | 76.5 | 311 | 15.98 | | |
| 1417 | 5.02 | 12.43 | 0.059 | 2.91 | 179 | 326 | 15.99 | | |
| 1420 | 4.88 | 12.31 | 0.060 | 2.92 | 181 | 332 | 15.99 | | |
| 1423 | 4.79 | 12.32 | 0.062 | 3.00 | 171 | 334 | 15.99 | | |
| 1426 | 4.76 | 12.32 | 0.063 | 2.95 | 117 | 331 | 15.98 | | |
| 1429 | 4.75 | 12.33 | 0.063 | 2.95 | 93.2 | 330 | 15.99 | | |
| 1432 | 4.75 | 12.33 | 0.063 | 3.03 | 60.1 | 330 | 15.98 | | |
| 1435 | 4.74 | 12.34 | 0.063 | 2.94 | 63.4 | 331 | 15.98 | | |
| 1438 | 4.73 | 12.34 | 0.063 | 2.87 | 54.5 | 331 | 15.98 | | |
| 1441 | 4.75 | 12.36 | 0.064 | 3.02 | 47.5 | 330 | 15.98 | | |
| 1444 | 4.69 | 12.56 | 0.063 | 2.91 | 31.4 | 335 | 15.98 | | |
| 1448 | 4.69 | 12.64 | 0.063 | 2.85 | 25.1 | 337 | 15.98 | | |
| 1451 | 4.62 | 12.66 | 0.062 | 2.23 | 22.3 | 339 | 15.98 | | |
| 1454 | 4.62 | 12.70 | 0.062 | 2.80 | 18.3 | 343 | 15.98 | | |
| 1457 | | Collect OBW-62-20220308 | | | | | | | |

**Certified Sample Information:**
Time of Sample: 1457

Analyst Signature:

**Instrument Data:**
Manufacturer/Model: Horiba - U52
Serial No. Unit: 20UGYU5K
Serial No. Handheld: SWSHSDOO
Calibration Date/Time: 03/08/22

**Are low-flow parameters subject to field lab certification? ☐ Yes ☐ No (not required for CERCLA sites or sites outside of NJ)**

**If yes, low-flow data must be accompanied by a completed "Field Calibration Record, Horiba U-52" form or equivalent.**

Brown AND Caldwell

Upper Saddle River, NJ Office

# LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: OBW-62
Sample I.D.: OBW-62-20220308

Project: D'Imperio
Personnel:

Date: 03/08/22 Time: 1405
Weather: Sunny Air Temp.: 53

## WELL DATA:

Casing Diameter: 6" ☐ Stainless Steel ☑ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☑ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 15.95 ft Bottom of Well: _____ ft
DATUM: ☐ Top of Protective Casing ☑ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☐ Yes ☑ No Is well clean to bottom? ☑ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☑ Yes ☐ No
Does Weep Hole adequately drain well head? ☑ Yes ☐ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☑ Yes ☐ No
Is Padlock Functional? ☐ Yes ☐ No ☑ NA Is Inner Casing Intact? ☐ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☑ Yes ☐ No
VOLUME OF WATER: Standing in well: _____ To be purged: _____

## PURGE DATA:

METHOD: ☐ Bailer, Size: ____ ☐ Bladder Pump ☑ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: Pump/Bailer: ☐ Teflon® ☑ Stainless Steel ☐ PVC ☐ Other: _____
Tubing/Rope: ☐ Teflon® ☑ Polyethylene ☐ Polypropylene ☐ Other: _____

Pumping Rate: 200 mL/min Elapsed Time: 45 min Volume Pumped: 300 gal
Was well Evacuated? ☐ Yes ☑ No Number of Well Volumes Removed: _____
PURGING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

## SAMPLING DATA:

METHOD: ☐ Bailer, Size: ____ ☐ Bladder Pump ☑ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Syringe Sampler ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: Pump/Bailer: ☐ Teflon® ☑ Stainless Steel
Tubing/Rope: ☐ Teflon® ☑ Polyethylene

SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned
Metals samples field filtered? ☐ Yes ☑ No Method: _____
APPEARANCE: ☑ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: See attached form for field parameter data.

DUP : ☑ No ☐ Yes Name: _____
MS/MSD : ☑ No ☐ Yes Name: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: [signature] Date: 03/08/22

**Brown AND Caldwell**

2 Park Way, Upper Saddle River, NJ 07458
Phone: (201) 574-4700 Fax: (201) 236-1607

## NJ FIELD LAB ID# 02023
## LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: D'Imperio
Client: BC
Personnel: MHM/MK
Purge/Sample Depth:

Project Number:
Date: 03/02/22
Well ID: OBW-63
Sample ID: OBW-63-20220302

| Actual Time | Certified Parameters | | | | | ORP (mV) | DTW (ft) | Pumping Rate (mL/min) | Comments |
|---|---|---|---|---|---|---|---|---|---|
| | pH | Temp (°C) | Cond (mS/cm) | DO ( mg/L ) | Turbidity (NTU) | | | | |
| 1513 | 5.41 | 12.63 | 0.029 | 10.62 | 25.2 | 307 | 13.73 | 350 | |
| 1516 | 5.37 | 12.72 | 0.086 | 7.61 | 62.9 | 312 | 13.73 | | |
| 1519 | 5.34 | 12.81 | 0.089 | 5.74 | 204 | 309 | 13.75 | | |
| 1522 | 5.14 | 12.61 | 0.079 | 7.15 | "(0.0)" | 300 | 13.80 | | |
| 1525 | | Empty Horiba | | | | | | | |
| 1528 | 4.79 | 13.44 | 0.077 | 5.62 | "0.0" | 281 | 13.80 | | |
| 1531 | 4.70 | 13.16 | 0.077 | 5.75 | "1000" | 289 | 13.88 | | |
| 1534 | | Empty Horiba | | | | | | | |
| 1537 | 4.76 | 13.13 | 0.079 | 6.09 | 176 | 303 | 13.83 | | |
| 1540 | 4.71 | 13.31 | 0.078 | 5.26 | 260 | 302 | 13.81 | | |
| 1543 | 4.69 | 13.31 | 0.079 | 5.78 | 209 | 307 | 13.78 | | |
| 1546 | 4.62 | 13.33 | 0.080 | 5.63 | 146 | 311 | 13.76 | | |
| 1549 | 4.69 | 13.32 | 0.080 | 5.00 | 121 | 312 | 13.76 | | |
| 1552 | 4.69 | 13.30 | 0.080 | 4.66 | 111 | 314 | 13.76 | | |
| 1555 | 4.70 | 13.26 | 0.080 | 4.36 | 107 | 315 | 13.76 | | |
| 1558 | 4.71 | 13.04 | 0.079 | 4.66 | 112 | 315 | 13.76 | | |
| 1601 | 4.71 | 12.78 | 0.079 | 4.90 | 107 | 317 | | | |
| 1604 | | Empty Horiba | | | | | | | |
| 1607 | 4.60 | 13.61 | 0.079 | 6.59 | 22.2 | 320 | 13.82 | | |
| 1610 | 4.60 | 13.53 | 0.079 | 6.60 | 31.0 | 330 | 13.82 | | |
| 1613 | 4.57 | 13.42 | 0.080 | 6.62 | 22.6 | 333 | 13.82 | | |
| 1616 | | Collect sample OBW-63-20220302 | | | | | | | |

**Certified Sample Information:**
Time of Sample: 1616
Analyst Signature:

**Instrument Data:**
Manufacturer/Model: Horiba-U52
Serial No. Unit: 20UGYU5K
Serial No. Handheld: SWSHSDOO
Calibration Date/Time: 03/02/22

Are low-flow parameters subject to field lab certification? ☐ Yes ☑ No (not required for CERCLA sites or sites outside of NJ)

If yes, low-flow data must be accompanied by a completed "Field Calibration Record, Horiba U-52" form or equivalent.

Brown AND Caldwell

Upper Saddle River, NJ Office

# LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: OBW-63
Sample I.D.: OBW-63-20220302

Project: D'Imperio
Personnel:

Date: 03/02/22 Time: 1513
Weather: sunny Air Temp.: 51

## WELL DATA:

Casing Diameter: 6" ☐ Stainless Steel ☑ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☑ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 13.65 ft Bottom of Well: _____ ft
DATUM: ☐ Top of Protective Casing ☑ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☐ Yes ☑ No Is well clean to bottom? ☑ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☑ Yes ☐ No
Does Weep Hole adequately drain well head? ☑ Yes ☐ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☑ Yes ☐ No
Is Padlock Functional? ☐ Yes ☐ No ☑ NA Is Inner Casing Intact? ☐ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☑ Yes ☐ No
VOLUME OF WATER: Standing in well: _____ To be purged: _____

## PURGE DATA:

METHOD: ☐ Bailer, Size: ____ ☐ Bladder Pump ☑ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: Pump/Bailer: ☐ Teflon® ☑ Stainless Steel ☐ PVC ☐ Other: _____
Tubing/Rope: ☐ Teflon® ☑ Polyethylene ☐ Polypropylene ☐ Other: _____

Pumping Rate: 350 Elapsed Time: 1hr Volume Pumped: 3.75 gal
Was well Evacuated? ☐ Yes ☑ No Number of Well Volumes Removed: _____
PURGING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

## SAMPLING DATA:

METHOD: ☐ Bailer, Size: ____ ☐ Bladder Pump ☑ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Syringe Sampler ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: Pump/Bailer: ☐ Teflon® ☑ Stainless Steel
Tubing/Rope: ☐ Teflon® ☑ Polyethylene

SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned
Metals samples field filtered? ☐ Yes ☑ No Method: _____
APPEARANCE: ☑ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: See attached form for field parameter data.

DUP : ☑ No ☐ Yes Name: _____
MS/MSD : ☑ No ☐ Yes Name: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: _____ Date: 03/08/22

**Brown AND Caldwell**

2 Park Way, Upper Saddle River, NJ 07458
Phone: (201) 574-4700 Fax: (201) 236-1607

## NJ FIELD LAB ID# 02023
## LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: D'Imperio
Client: BC
Personnel: MHM/NK
Purge/Sample Depth:

Project Number:
Date: 03/09/22
Well ID: MW-55
Sample ID: MW-55-20220309

| Actual Time | Certified Parameters | | | | | ORP (mV) | DTW (ft) | Pumping Rate (mL/min) | Comments |
|---|---|---|---|---|---|---|---|---|---|
| | pH | Temp (°C) | Cond (mS/cm) | DO ( mg/L ) | Turbidity (NTU) | | | | |
| 837 | 9.07 | 11.65 | 0.137 | 2.37 | 17.1 | 192 | 15.04 | 250 | |
| 840 | 8.50 | 11.23 | 0.137 | 2.10 | 14.3 | 201 | 14.66 | | |
| 843 | 8.21 | 11.24 | 0.136 | 1.79 | 19.9 | 204 | 14.66 | | |
| 846 | 7.78 | 11.44 | 0.133 | 1.60 | 19.8 | 201 | 14.66 | | |
| 849 | 7.53 | 11.69 | 0.131 | 1.55 | 15.7 | 196 | 14.67 | | |
| 852 | 7.46 | 11.67 | 0.131 | 1.58 | 14.4 | 192 | 14.67 | | |
| 855 | 7.33 | 11.78 | 0.126 | 1.58 | 15.1 | 188 | 14.67 | | |
| 858 | 7.24 | 11.58 | 0.123 | 1.61 | 15.2 | 187 | 14.67 | | |
| 901 | 6.98 | 11.98 | 0.111 | 1.77 | 12.5 | 188 | 14.67 | | |
| 904 | 6.75 | 11.97 | 0.103 | 1.93 | 10.4 | 192 | 14.67 | | |
| 907 | 6.56 | 12.06 | 0.097 | 2.14 | 8.4 | 197 | 14.67 | | |
| 910 | | Collect sample | | | MW-55-20220309 | | | | |

**Certified Sample Information:**
Time of Sample: 910
Analyst Signature:

**Instrument Data:**
Manufacturer/Model: Horiba-U52
Serial No. Unit: 20UGYU5K
Serial No. Handheld: SWSHSDOO
Calibration Date/Time: 03/09/22

**Are low-flow parameters subject to field lab certification? ☐ Yes ☐ No (not required for CERCLA sites or sites outside of NJ)**

**If yes, low-flow data must be accompanied by a completed "Field Calibration Record, Horiba U-52" form or equivalent.**

Brown AND Caldwell

Upper Saddle River, NJ Office

# LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-55
Sample I.D.: MW-55-20220309

Project: D'Imperio
Personnel:

Date: 03/09/22 Time: 837
Weather: Cloudy/Rain Air Temp.: 38

## WELL DATA:

Casing Diameter: 6" ☐ Stainless Steel ☑ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☑ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 14.54 ft Bottom of Well: _____ ft
DATUM: ☐ Top of Protective Casing ☑ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☐ Yes ☑ No Is well clean to bottom? ☑ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☑ Yes ☐ No
Does Weep Hole adequately drain well head? ☑ Yes ☐ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☑ Yes ☐ No
Is Padlock Functional? ☐ Yes ☐ No ☑ NA Is Inner Casing Intact? ☐ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☑ Yes ☐ No
VOLUME OF WATER: Standing in well: _____ To be purged: _____

## PURGE DATA:

METHOD: ☐ Bailer, Size: ____ ☐ Bladder Pump ☑ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: (Pump)/Bailer: ☐ Teflon® ☑ Stainless Steel ☐ PVC ☐ Other: _____
(Tubing)/Rope: ☐ Teflon® ☑ Polyethylene ☐ Polypropylene ☐ Other: _____

Pumping Rate: 250 Elapsed Time: 30min Volume Pumped: 2.5 gal
Was well Evacuated? ☐ Yes ☑ No Number of Well Volumes Removed: _____
PURGING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

## SAMPLING DATA:

METHOD: ☐ Bailer, Size: ____ ☐ Bladder Pump ☑ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Syringe Sampler ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: (Pump)/Bailer: ☐ Teflon® ☑ Stainless Steel
(Tubing)/Rope: ☐ Teflon® ☑ Polyethylene

SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned
Metals samples field filtered? ☐ Yes ☑ No Method: _____
APPEARANCE: ☑ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: See attached form for field parameter data.

DUP : ☑ No ☐ Yes Name: _____
MS/MSD : ☑ No ☐ Yes Name: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: _____ Date: 03/09/22

**Brown AND Caldwell**

2 Park Way, Upper Saddle River, NJ 07458
Phone: (201) 574-4700 Fax: (201) 236-1607

## NJ FIELD LAB ID# 02023
## LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: D'Imperio
Client: BC
Personnel: MHM/NK
Purge/Sample Depth:

Project Number:
Date: 03/09/22
Well ID: MW-59
Sample ID: MW-59-20220309

| Actual Time | Certified Parameters | | | | | ORP (mV) | DTW (ft) | Pumping Rate (mL/min) | Comments |
|---|---|---|---|---|---|---|---|---|---|
| | pH | Temp (°C) | Cond (mS/cm) | DO ( mg/L ) | Turbidity (NTU) | | | | |
| 930 | 6.59 | 11.97 | 0.098 | 7.07 | 4.3 | 230 | 11.76 | 250 | |
| 933 | 5.88 | 12.08 | 0.097 | 5.97 | 8.0 | 256 | 11.75 | ↓ | |
| 936 | 5.64 | 11.97 | 0.094 | 6.22 | 14.3 | 266 | 11.76 | | |
| 939 | 5.61 | 12.14 | 0.093 | 6.13 | 12.9 | 266 | 11.76 | | |
| 942 | 5.50 | 12.32 | 0.090 | 6.05 | 10.9 | 269 | 11.75 | | |
| 945 | 5.42 | 12.44 | 0.087 | 6.21 | 8.6 | 273 | 11.75 | | |
| 948 | 5.35 | 12.56 | 0.082 | 6.25 | 7.7 | 278 | 11.75 | | |
| 951 | 5.32 | 12.60 | 0.078 | 6.35 | 7.4 | 284 | 11.75 | | |
| 954 | 5.28 | 12.70 | 0.074 | 6.43 | 7.3 | 290 | 11.75 | | |
| 957 | 5.24 | 12.66 | 0.071 | 6.47 | 7.5 | 295 | 11.75 | | |
| 1000 | 5.22 | 12.66 | 0.069 | 6.57 | 7.1 | 297 | 11.75 | | |
| 1003 | | Collect sample MW-59-20220309 | | | | | | | |

**Certified Sample Information:**
Time of Sample: 1003
Analyst Signature:

**Instrument Data:**
Manufacturer/Model: Horiba - U52
Serial No. Unit: 20UGYU5K
Serial No. Handheld: SWSH5D00
Calibration Date/Time: 03/09/22

**Are low-flow parameters subject to field lab certification? ☐ Yes ☐ No (not required for CERCLA sites or sites outside of NJ)**

**If yes, low-flow data must be accompanied by a completed "Field Calibration Record, Horiba U-52" form or equivalent.**

Brown AND Caldwell

Upper Saddle River, NJ Office

# LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-59
Sample I.D.: MW-59-20220309

Project: D'Imperio
Personnel:

Date: 03/09/22 Time: 930
Weather: Cloudy/Rain Air Temp.: 38

## WELL DATA:

Casing Diameter: 6" ☐ Stainless Steel ☑ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☑ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 11.72 ft Bottom of Well: _____ ft
DATUM: ☐ Top of Protective Casing ☑ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☐ Yes ☑ No Is well clean to bottom? ☑ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☑ Yes ☐ No
Does Weep Hole adequately drain well head? ☑ Yes ☐ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☑ Yes ☐ No
Is Padlock Functional? ☐ Yes ☐ No ☑ NA Is Inner Casing Intact? ☐ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☑ Yes ☐ No
VOLUME OF WATER: Standing in well: _____ To be purged: _____

## PURGE DATA:

METHOD: ☐ Bailer, Size: ____ ☐ Bladder Pump ☑ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: (Pump/Bailer): ☐ Teflon® ☑ Stainless Steel ☐ PVC ☐ Other: _____
(Tubing/Rope): ☐ Teflon® ☑ Polyethylene ☐ Polypropylene ☐ Other: _____

Pumping Rate: 250 Elapsed Time: 30min'0 Volume Pumped: 2.5gal
Was well Evacuated? ☐ Yes ☑ No Number of Well Volumes Removed: _____
PURGING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

## SAMPLING DATA:

METHOD: ☐ Bailer, Size: ____ ☐ Bladder Pump ☑ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Syringe Sampler ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: (Pump/Bailer): ☐ Teflon® ☑ Stainless Steel
(Tubing/Rope): ☐ Teflon® ☑ Polyethylene

SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned
Metals samples field filtered? ☐ Yes ☑ No Method: _____
APPEARANCE: ☑ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: See attached form for field parameter data.

DUP : ☑ No ☐ Yes Name: _____
MS/MSD : ☑ No ☐ Yes Name: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: [signature] Date: 03/09/22

**Brown AND Caldwell**

2 Park Way, Upper Saddle River, NJ 07458
Phone: (201) 574-4700 Fax: (201) 236-1607

**NJ FIELD LAB ID# 02023**
**LOW-FLOW GROUNDWATER FIELD DATA SHEET**

Project Name: D'Imperio
Client: BC
Personnel: MH/MK
Purge/Sample Depth:

Project Number:
Date: 03/09/22
Well ID: MW-28-1
Sample ID: MW-28-1-20220309

| Actual Time | Certified Parameters | | | | | ORP (mV) | DTW (ft) | Pumping Rate (mL/min) | Comments |
|---|---|---|---|---|---|---|---|---|---|
| | pH | Temp (°C) | Cond (mS/cm) | DO ( mg/L ) | Turbidity (NTU) | | | | |
| 1104 | 5.05 | 11.89 | 0.040 | 7.90 | 30.4 | 309 | 29.19 | 300 | |
| 1107 | 4.62 | 12.44 | 0.039 | 6.95 | 41.9 | 344 | 29.20 | | |
| 1110 | 4.60 | 13.32 | 0.038 | 6.92 | 40.3 | 334 | 29.20 | | |
| 1113 | 4.60 | 14.80 | 0.036 | 6.97 | 33.2 | 339 | 29.20 | | |
| 1116 | 4.59 | 15.00 | 0.036 | 6.92 | 28.8 | 342 | 29.20 | | |
| 1119 | 4.59 | 15.18 | 0.035 | 6.59 | 17.0 | 353 | 29.20 | | |
| 1122 | 4.60 | 15.19 | 0.035 | 6.60 | 10.8 | 354 | 29.20 | | |
| 1125 | 4.59 | 15.27 | 0.035 | 6.50 | 8.7 | 355 | 29.20 | | |
| 1128 | 4.58 | 15.40 | 0.034 | 6.63 | 6.6 | 357 | 29.20 | | |
| 1131 | 4.60 | 15.51 | 0.034 | 6.57 | 5.7 | 358 | 29.20 | | |
| 1134 | 4.59 | 15.56 | 0.035 | 6.65 | 3.7 | 361 | 29.20 | | |
| 1137 | 4.59 | 15.55 | 0.035 | 6.66 | 4.0 | 362 | 29.20 | | |
| 1140 | | collect sample | | | MW-28-1-20220309 | | | | |

**Certified Sample Information:**
Time of Sample: 1140
Analyst Signature:

**Instrument Data:**
Manufacturer/Model: Horiba-U52
Serial No. Unit: 20UGYU5K
Serial No. Handheld: SWSH5D00
Calibration Date/Time: 03/09/22

**Are low-flow parameters subject to field lab certification? ☐ Yes ☐ No (not required for CERCLA sites or sites outside of NJ)**

**If yes, low-flow data must be accompanied by a completed "Field Calibration Record, Horiba U-52" form or equivalent.**

Brown AND Caldwell

Upper Saddle River, NJ Office

# LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-28-1
Sample I.D.: MW-28-20220309

Project: D'Imperio
Personnel:

Date: 03/09/22 Time: 1104
Weather: Cloudy Air Temp.: 40

## WELL DATA:

Casing Diameter: 6" ☐ Stainless Steel ☑ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☑ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 29.16 ft Bottom of Well: _____ft
DATUM: ☐ Top of Protective Casing ☑ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☐ Yes ☑ No Is well clean to bottom? ☑ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☑ Yes ☐ No
Does Weep Hole adequately drain well head? ☑ Yes ☐ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☑ Yes ☐ No
Is Padlock Functional? ☐ Yes ☐ No ☑ NA Is Inner Casing Intact? ☐ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☑ Yes ☐ No
VOLUME OF WATER: Standing in well: _____ To be purged: _____

## PURGE DATA:

METHOD: ☐ Bailer, Size: ____ ☐ Bladder Pump ☑ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: (Pump)/Bailer: ☐ Teflon® ☑ Stainless Steel ☐ PVC ☐ Other: _____
(Tubing)/Rope: ☐ Teflon® ☑ Polyethylene ☐ Polypropylene ☐ Other: _____

Pumping Rate: 300 Elapsed Time: 33 min Volume Pumped: 3.3 gal
Was well Evacuated? ☐ Yes ☑ No Number of Well Volumes Removed: _____
PURGING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

## SAMPLING DATA:

METHOD: ☐ Bailer, Size: ____ ☐ Bladder Pump ☑ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Syringe Sampler ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: (Pump)/Bailer: ☐ Teflon® ☑ Stainless Steel
(Tubing)/Rope: ☐ Teflon® ☑ Polyethylene

SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned
Metals samples field filtered? ☐ Yes ☑ No Method: _____
APPEARANCE: ☑ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: See attached form for field parameter data.

DUP : ☑ No ☐ Yes Name: _____
MS/MSD : ☑ No ☐ Yes Name: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: _____ Date: 03/09/22

**Brown AND Caldwell**

2 Park Way, Upper Saddle River, NJ 07458
Phone: (201) 574-4700 Fax: (201) 236-1607

## NJ FIELD LAB ID# 02023
## LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: D'Imperio
Client: BC
Personnel: MHA/AK
Purge/Sample Depth:

Project Number:
Date: 03/09/22
Well ID: MW-28-2
Sample ID: MW-28-2-20220309

| Actual Time | Certified Parameters | | | | | ORP (mV) | DTW (ft) | Pumping Rate (mL/min) | Comments |
|---|---|---|---|---|---|---|---|---|---|
| | pH | Temp (°C) | Cond (mS/cm) | DO ( mg/L ) | Turbidity (NTU) | | | | |
| 1150 | 5.35 | 11.89 | 0.111 | 6.16 | 17.8 | 46 | 29.49 | 250 | |
| 1153 | 6.06 | 12.34 | 0.125 | 1.20 | 22.6 | -13 | 29.48 | | |
| 1156 | 6.28 | 12.18 | 0.135 | 0.48 | 17.8 | -19 | 29.48 | | |
| 1159 | 6.38 | 12.42 | 0.138 | 0.13 | 22.5 | -40 | 29.48 | | |
| 1202 | 6.43 | 12.74 | 0.141 | 0.00 | 8.0 | -50 | 29.48 | | |
| 1205 | 6.52 | 13.06 | 0.142 | 0.00 | 5.9 | -57 | 29.48 | | |
| 1208 | 6.53 | 13.42 | 0.143 | 0.00 | 4.3 | -65 | 29.48 | | |
| 1211 | 6.59 | 13.67 | 0.144 | 0.00 | 2.9 | -72 | 29.48 | | |
| 1214 | 6.62 | 13.66 | 0.145 | 0.00 | 2.0 | -76 | 29.48 | | |
| 1217 | 6.63 | 13.71 | 0.146 | 0.00 | 1.6 | -79 | 29.48 | | |
| 1220 | 6.66 | 13.79 | 0.145 | 0.00 | 1.4 | -82 | 29.48 | | |
| 1223 | | collect sample | | | MW-28-2-20220309 | | | | |

**Certified Sample Information:**
Time of Sample: 1223

Analyst Signature:

**Instrument Data:**
Manufacturer/Model: Horiba-U52
Serial No. Unit: 20UGYU5K
Serial No. Handheld: SWSHSDOO
Calibration Date/Time: 03/09/22

**Are low-flow parameters subject to field lab certification? ☐ Yes ☐ No (not required for CERCLA sites or sites outside of NJ)**

**If yes, low-flow data must be accompanied by a completed "Field Calibration Record, Horiba U-52" form or equivalent.**

**Brown AND Caldwell**

Upper Saddle River, NJ Office

# LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-28-2
Sample I.D.: MW-28-2

Project: D'Imperio
Personnel:

Date: 03/09/22 Time: 1150
Weather: Cloudy Air Temp.: 40

## WELL DATA:

Casing Diameter: 6" ☐ Stainless Steel ☑ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☑ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 29.48 ft Bottom of Well: _____ ft
DATUM: ☐ Top of Protective Casing ☑ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☐ Yes ☐ No Is well clean to bottom? ☑ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☑ Yes ☐ No
Does Weep Hole adequately drain well head? ☑ Yes ☐ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☑ Yes ☐ No
Is Padlock Functional? ☐ Yes ☐ No ☑ NA Is Inner Casing Intact? ☐ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☑ Yes ☐ No
VOLUME OF WATER: Standing in well: _____ To be purged: _____

## PURGE DATA:

METHOD: ☐ Bailer, Size: ____ ☐ Bladder Pump ☑ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: (Pump/Bailer): ☐ Teflon® ☑ Stainless Steel ☐ PVC ☐ Other: _____
(Tubing)/Rope: ☐ Teflon® ☑ Polyethylene ☐ Polypropylene ☐ Other: _____

Pumping Rate: 250 mL/min Elapsed Time: 30 min Volume Pumped: 2.5 gal
Was well Evacuated? ☐ Yes ☑ No Number of Well Volumes Removed: _____
PURGING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

## SAMPLING DATA:

METHOD: ☐ Bailer, Size: ____ ☐ Bladder Pump ☑ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Syringe Sampler ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: (Pump/Bailer): ☐ Teflon® ☑ Stainless Steel
(Tubing)/Rope: ☐ Teflon® ☑ Polyethylene

SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned
Metals samples field filtered? ☐ Yes ☑ No Method: _____
APPEARANCE: ☑ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: See attached form for field parameter data.

DUP : ☑ No ☐ Yes Name: _____
MS/MSD : ☑ No ☐ Yes Name: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: _____ Date: 03/09/22

**Brown AND Caldwell**

2 Park Way, Upper Saddle River, NJ 07458
Phone: (201) 574-4700 Fax: (201) 236-1607

## NJ FIELD LAB ID# 02023
## LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: D'Imperio
Client: BC
Personnel: MHM/NK
Purge/Sample Depth:

Project Number:
Date: 03/09/22
Well ID: MW-43
Sample ID: MW-43-20220309

| Actual Time | Certified Parameters | | | | | ORP (mV) | DTW (ft) | Pumping Rate (mL/min) | Comments |
|---|---|---|---|---|---|---|---|---|---|
| | pH | Temp (°C) | Cond (mS/cm) | DO ( mg/L ) | Turbidity (NTU) | | | | |
| 1245 | 6.24 | 12.30 | 0.099 | 0.15 | 193 | -7 | 25.84 | 250 | |
| 1248 | 6.13 | 12.70 | 0.104 | 0.00 | 159 | -14 | 25.83 | | |
| 1251 | 6.12 | 13.14 | 0.105 | 0.00 | 115 | -18 | 25.83 | | |
| 1254 | 6.13 | 14.01 | 0.105 | 0.00 | 94.1 | -21 | 25.83 | | |
| 1257 | 6.17 | 14.58 | 0.105 | 0.00 | 72.0 | -27 | 25.83 | | |
| 1300 | 6.19 | 14.87 | 0.106 | 0.00 | 55.0 | -32 | 25.83 | | |
| 1303 | 6.22 | 15.10 | 0.106 | 0.00 | 44.4 | -36 | 25.83 | | |
| 1306 | 6.22 | 15.23 | 0.106 | 0.00 | 32.1 | -39 | 25.83 | | |
| 1309 | 6.23 | 15.24 | 0.106 | 0.00 | 29.2 | -40 | 25.83 | | |
| 1312 | 6.24 | 15.35 | 0.106 | 0.00 | 26.7 | -43 | 25.83 | | |
| 1315 | 6.26 | 15.38 | 0.106 | 0.00 | 20.6 | -45 | 25.83 | | |
| 1318 | | | collect sample | | | MW-43-20220309 | | | |

**Certified Sample Information:**
Time of Sample: 1318
Analyst Signature:

**Instrument Data:**
Manufacturer/Model: Horiba - U52
Serial No. Unit: 20UGYU5K
Serial No. Handheld: SWSH5D00
Calibration Date/Time: 03/09/22

**Are low-flow parameters subject to field lab certification? ☐ Yes ☐ No (not required for CERCLA sites or sites outside of NJ)**

**If yes, low-flow data must be accompanied by a completed "Field Calibration Record, Horiba U-52" form or equivalent.**

Brown AND Caldwell

Upper Saddle River, NJ Office

# LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-43
Sample I.D.: MW-43-20220309

Project: D'Imperio
Personnel:

Date: 03/09/22 Time: 1245
Weather: Cloudy Air Temp.: 41

## WELL DATA:

Casing Diameter: 6" ☐ Stainless Steel ☑ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☑ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 24.37 ft Bottom of Well: _____ ft
DATUM: ☐ Top of Protective Casing ☑ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☐ Yes ☐ No Is well clean to bottom? ☑ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☑ Yes ☐ No
Does Weep Hole adequately drain well head? ☑ Yes ☐ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☑ Yes ☐ No
Is Padlock Functional? ☐ Yes ☐ No ☑ NA Is Inner Casing Intact? ☐ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☑ Yes ☐ No
VOLUME OF WATER: Standing in well: _____ To be purged: _____

## PURGE DATA:

METHOD: ☐ Bailer, Size: ____ ☐ Bladder Pump ☐ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: (Pump)/Bailer: ☐ Teflon® ☑ Stainless Steel ☐ PVC ☐ Other: _____
(Tubing)/Rope: ☐ Teflon® ☑ Polyethylene ☐ Polypropylene ☐ Other: _____

Pumping Rate: 250 mL/min Elapsed Time: 39 min Volume Pumped: 2.5 gal
Was well Evacuated? ☐ Yes ☑ No Number of Well Volumes Removed: _____
PURGING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

## SAMPLING DATA:

METHOD: ☐ Bailer, Size: ____ ☐ Bladder Pump ☑ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Syringe Sampler ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: (Pump)/Bailer: ☐ Teflon® ☑ Stainless Steel
(Tubing)/Rope: ☐ Teflon® ☑ Polyethylene

SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned
Metals samples field filtered? ☐ Yes ☑ No Method: _____
APPEARANCE: ☑ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: See attached form for field parameter data.

DUP : ☑ No ☐ Yes Name: _____
MS/MSD : ☑ No ☐ Yes Name: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: _____ Date: 03/09/22

**Brown AND Caldwell**

2 Park Way, Upper Saddle River, NJ 07458
Phone: (201) 574-4700 Fax: (201) 236-1607

**NJ FIELD LAB ID# 02023**
**LOW-FLOW GROUNDWATER FIELD DATA SHEET**

Project Name: ~~D'Imperio~~ D'Imperio
Client: Br
Personnel: MH/MK
Purge/Sample Depth:

Project Number:
Date: 03/10/22
Well ID: MW-73
Sample ID: MW-73-20220310

| Actual Time | Certified Parameters | | | | | ORP (mV) | DTW (ft) | Pumping Rate (mL/min) | Comments |
|---|---|---|---|---|---|---|---|---|---|
| | pH | Temp (°C) | Cond (mS/cm) | DO ( mg/L ) | Turbidity (NTU) | | | | |
| 0830 | 12.02 | 13.60 | 0.763 | 2.94 | 24.5 | -26 | 21.61 | 200 | |
| 0853 | 12.24 | 13.49 | 0.893 | 1.64 | 137 | -57 | 21.50 | | |
| 0856 | 12.53 | 13.66 | 2.87 | 1.23 | 101 | -94 | 21.42 | | |
| 0859 | 12.67 | 13.77 | 2.89 | 1.25 | 80.0 | -94 | 21.24 | | |
| 0902 | 12.65 | 13.93 | 2.72 | 1.24 | 57.2 | -92 | 21.22 | | |
| 0905 | 12.61 | 13.99 | 2.52 | 1.25 | 46.9 | -89 | 21.22 | | |
| 0908 | 12.55 | 14.16 | 2.16 | 1.21 | 39.5 | -84 | 21.23 | | |
| 0911 | 12.50 | 14.19 | 1.91 | 1.19 | 31.3 | -79 | 21.22 | | |
| 0914 | 12.47 | 14.22 | 1.74 | 1.56 | 23.2 | -76 | 21.24 | | |
| 0917 | 12.43 | 14.31 | 1.60 | 1.62 | 15.3 | -75 | 21.22 | | |
| 0920 | 12.39 | 14.36 | 1.47 | 1.70 | 10.0 | -72 | 21.23 | | |
| 0923 | 12.37 | 14.50 | 1.37 | 1.83 | 6.8 | -70 | 21.22 | | |
| 0926 | | Collect Sample | | | MW-73-20220310 | | | | |

**Certified Sample Information:**
Time of Sample: 0926
Analyst Signature:

**Instrument Data:**
Manufacturer/Model: Horiba - U52
Serial No. Unit: 20UGYU5K
Serial No. Handheld: SWSH5D00
Calibration Date/Time: 03/10/22

**Are low-flow parameters subject to field lab certification? ☐ Yes ☐ No (not required for CERCLA sites or sites outside of NJ)**

**If yes, low-flow data must be accompanied by a completed "Field Calibration Record, Horiba U-52" form or equivalent.**

Brown AND Caldwell

Upper Saddle River, NJ Office

# LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-73
Sample I.D.: MW-73-20220310

Project: ~~Dimpark~~ D'Imperio
Personnel: MH/LK

Date: 03/10/22 Time: 0850
Weather: Fog Air Temp.: 37

## WELL DATA:

Casing Diameter: 6" ☐ Stainless Steel ☑ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☑ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 20.90 ft Bottom of Well: _____ ft
DATUM: ☐ Top of Protective Casing ☑ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☐ Yes ☑ No Is well clean to bottom? ☑ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☑ Yes ☐ No
Does Weep Hole adequately drain well head? ☑ Yes ☐ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☑ Yes ☐ No
Is Padlock Functional? ☐ Yes ☐ No ☑ NA Is Inner Casing Intact? ☐ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☑ Yes ☐ No
VOLUME OF WATER: Standing in well: _____ To be purged: _____

## PURGE DATA:

METHOD: ☐ Bailer, Size: ____ ☐ Bladder Pump ☑ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: (Pump)/Bailer: ☐ Teflon® ☑ Stainless Steel ☐ PVC ☐ Other: _____
(Tubing)/Rope: ☐ Teflon® ☑ Polyethylene ☐ Polypropylene ☐ Other: _____

Pumping Rate: 200 mL/min Elapsed Time: 33 min Volume Pumped: 2.2 Gal
Was well Evacuated? ☐ Yes ☑ No Number of Well Volumes Removed: _____
PURGING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

## SAMPLING DATA:

METHOD: ☐ Bailer, Size: ____ ☐ Bladder Pump ☑ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Syringe Sampler ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: (Pump)/Bailer: ☐ Teflon® ☑ Stainless Steel
(Tubing)/Rope: ☐ Teflon® ☑ Polyethylene

SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned
Metals samples field filtered? ☐ Yes ☑ No Method: _____
APPEARANCE: ☑ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: See attached form for field parameter data.

DUP : ☑ No ☐ Yes Name: _____
MS/MSD : ☑ No ☐ Yes Name: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: _____ Date: 03/10/22

**Brown AND Caldwell**

2 Park Way, Upper Saddle River, NJ 07458
Phone: (201) 574-4700 Fax: (201) 236-1607

## NJ FIELD LAB ID# 02023
## LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: ~~D'Imperts~~ D'Imperio
Client: BC
Personnel: MHM/MK
Purge/Sample Depth:

Project Number:
Date: 03/10/22
Well ID: MW-70
Sample ID: MW-70-20220310

| Actual Time | Certified Parameters | | | | | ORP (mV) | DTW (ft) | Pumping Rate (mL/min) | Comments |
|---|---|---|---|---|---|---|---|---|---|
| | pH | Temp (°C) | Cond (mS/cm) | DO ( mg/L ) | Turbidity (NTU) | | | | |
| 0945 | 9.08 | 13.69 | 0.149 | 4.26 | 79.4 | 145 | 14.91 | 250 | |
| 0948 | 8.42 | 14.01 | 0.123 | 4.00 | "0.0" | 33 | 14.93 | | |
| 0951 | 7.72 | 14.37 | 0.105 | 3.41 | "0.0" | 67 | 14.93 | | |
| 0954 | 7.47 | 14.40 | 0.093 | 4.23 | "0.0" | 103 | 14.93 | | |
| 0957 | 7.19 | 14.38 | 0.083 | 4.16 | 1000 | 118 | 14.93 | | |
| 1000 | 6.86 | 14.41 | 0.076 | 4.54 | 646 | 129 | 14.93 | | |
| 1003 | 6.65 | 14.44 | 0.076 | 4.47 | 602 | 131 | 14.93 | | |
| 1006 | 6.64 | 14.46 | 0.070 | 4.33 | 560 | 130 | 14.91 | | |
| 1009 | 6.28 | 14.57 | 0.066 | 3.87 | 282 | 142 | 14.91 | | |
| 1012 | 6.17 | 14.59 | 0.064 | 4.16 | 192 | 152 | 14.91 | | |
| 1015 | 6.12 | 14.64 | 0.061 | 4.27 | 155 | 159 | 14.91 | | |
| 1018 | 6.14 | 14.50 | 0.058 | 3.76 | 286 | 160 | 14.91 | | |
| 1021 | 6.05 | 14.48 | 0.054 | 4.03 | 89.5 | 176 | 14.91 | | |
| 1024 | 6.02 | 14.53 | 0.054 | 4.44 | 86.2 | 182 | 14.91 | | |
| 1027 | 5.96 | 14.58 | 0.054 | 4.30 | 71.2 | 184 | 14.91 | | |
| 1030 | 5.93 | 14.55 | 0.054 | 4.16 | 69.4 | 189 | 14.90 | | |
| 1033 | 5.92 | 14.52 | 0.054 | 4.05 | 63.1 | 194 | 14.90 | | |
| 1036 | 5.89 | 14.55 | 0.055 | 4.14 | 54.3 | 199 | 14.91 | | |
| 1039 | 5.86 | 14.53 | 0.056 | 3.80 | 57.3 | 202 | 14.91 | | |
| 1042 | 5.81 | 14.62 | 0.052 | 4.32 | 45.9 | 204 | 14.91 | | |
| 1045 | | Collect sample | | | MW-70-20220310 | | | | |

**Certified Sample Information:**
Time of Sample: 1045
Analyst Signature:

**Instrument Data:**
Manufacturer/Model: Horiba-U52
Serial No. Unit: 20UGYU56
Serial No. Handheld: SWSHSD20
Calibration Date/Time: 03/10/22

**Are low-flow parameters subject to field lab certification? ☐ Yes ☐ No (not required for CERCLA sites or sites outside of NJ)**

**If yes, low-flow data must be accompanied by a completed "Field Calibration Record, Horiba U-52" form or equivalent.**

Brown AND Caldwell

Upper Saddle River, NJ Office

# LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-70
Sample I.D.: MW-70-20220310

Project: ~~D'Imperio~~ D'Imperio
Personnel: MH/LL

Date: 03/10/22 Time: 0945
Weather: FOG Air Temp.: 41

## WELL DATA:

Casing Diameter: 6" ☐ Stainless Steel ☑ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☑ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 14.26 ft Bottom of Well: _____ ft
DATUM: ☐ Top of Protective Casing ☑ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☐ Yes ☑ No Is well clean to bottom? ☑ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☑ Yes ☐ No
Does Weep Hole adequately drain well head? ☑ Yes ☐ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☑ Yes ☐ No
Is Padlock Functional? ☐ Yes ☐ No ☑ NA Is Inner Casing Intact? ☐ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☑ Yes ☐ No
VOLUME OF WATER: Standing in well: _____ To be purged: _____

## PURGE DATA:

METHOD: ☐ Bailer, Size: ____ ☐ Bladder Pump ☑ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: (Pump)/Bailer: ☐ Teflon® ☑ Stainless Steel ☐ PVC ☐ Other: _____
(Tubing)/Rope: ☐ Teflon® ☑ Polyethylene ☐ Polypropylene ☐ Other: _____

Pumping Rate: 250 mL/min Elapsed Time: 50 min Volume Pumped: 40 gal
Was well Evacuated? ☐ Yes ☑ No Number of Well Volumes Removed: _____
PURGING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

## SAMPLING DATA:

METHOD: ☐ Bailer, Size: ____ ☐ Bladder Pump ☑ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Syringe Sampler ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: (Pump)/Bailer: ☐ Teflon® ☑ Stainless Steel
(Tubing)/Rope: ☐ Teflon® ☑ Polyethylene

SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned
Metals samples field filtered? ☐ Yes ☑ No Method: _____
APPEARANCE: ☑ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: See attached form for field parameter data.

DUP : ☑ No ☐ Yes Name: _____
MS/MSD : ☑ No ☐ Yes Name: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: _____ Date: 03/10/22

**Brown AND Caldwell**

2 Park Way, Upper Saddle River, NJ 07458
Phone: (201) 574-4700 Fax: (201) 236-1607

**NJ FIELD LAB ID# 02023**
**LOW-FLOW GROUNDWATER FIELD DATA SHEET**

Project Name: ~~D'Imparts~~ D'Imperio
Client: Br
Personnel: MHM/MK
Purge/Sample Depth:

Project Number:
Date: 03/10/22
Well ID: MW-71
Sample ID: MW-71-20220310

| Actual Time | Certified Parameters | | | | | ORP (mV) | DTW (ft) | Pumping Rate (mL/min) | Comments |
|---|---|---|---|---|---|---|---|---|---|
| | pH | Temp (°C) | Cond (mS/cm) | DO ( mg/L ) | Turbidity (NTU) | | | | |
| 1110 | 11.29 | 12.46 | 0.555 | 8.11 | 59.7 | 53 | 22.49 | 250 | |
| 1113 | 11.48 | 12.28 | 0.460 | 2.11 | 43.6 | 31 | 22.35 | | |
| 1116 | 11.40 | 12.25 | 0.435 | 1.77 | 33.0 | 25 | 22.30 | | |
| 1119 | 11.47 | 12.17 | 0.423 | 2.11 | 27.6 | 17 | 22.30 | | |
| 1122 | 11.47 | 12.18 | 0.422 | 2.06 | 24.0 | 14 | 22.30 | | |
| 1125 | 11.40 | 12.23 | 0.402 | 1.96 | 15.0 | 10 | 22.30 | | |
| 1128 | 11.28 | 12.27 | 0.376 | 2.02 | 9.4 | 10 | 22.30 | | |
| 1131 | 11.07 | 12.35 | 0.330 | 2.29 | 5.6 | 14 | 22.30 | | |
| 1134 | 10.91 | 12.43 | 0.298 | 2.49 | 4.3 | 17 | 22.30 | | |
| 1137 | 10.70 | 12.44 | 0.264 | 2.59 | 2.9 | 24 | 22.30 | | |
| 1140 | 10.50 | 12.55 | 0.232 | 4.03 | 1.4 | 31 | 22.30 | | |
| 1143 | | Collect Sample MW-71-20220310 | | | | | | | |

**Certified Sample Information:**
Time of Sample: 1143
Analyst Signature:

**Instrument Data:**
Manufacturer/Model: Horiba-U52
Serial No. Unit: 2QU6YU56
Serial No. Handheld: SWSHSDOO
Calibration Date/Time: 03/10/22

**Are low-flow parameters subject to field lab certification? ☐ Yes ☐ No (not required for CERCLA sites or sites outside of NJ)**

**If yes, low-flow data must be accompanied by a completed "Field Calibration Record, Horiba U-52" form or equivalent.**

**Brown AND Caldwell**

Upper Saddle River, NJ Office

# LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-71
Sample I.D.: MW-71-20220310

Project: ~~D'Imperio~~ D'Imperio
Personnel: MH/MK

Date: 03/10/22 Time: 1110
Weather: Partly Cloudy Air Temp.: 44

## WELL DATA:

Casing Diameter: 4" ☐ Stainless Steel ☑ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☑ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 21.91 ft Bottom of Well: _____ ft
DATUM: ☐ Top of Protective Casing ☑ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☐ Yes ☑ No Is well clean to bottom? ☑ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☑ Yes ☐ No
Does Weep Hole adequately drain well head? ☑ Yes ☐ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☑ Yes ☐ No
Is Padlock Functional? ☐ Yes ☐ No ☑ NA Is Inner Casing Intact? ☐ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☐ Yes ☐ No
VOLUME OF WATER: Standing in well: _____ To be purged: _____

## PURGE DATA:

METHOD: ☐ Bailer, Size: ____ ☐ Bladder Pump ☑ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: (Pump/Bailer): ☐ Teflon® ☑ Stainless Steel ☐ PVC ☐ Other: _____
(Tubing/Rope): ☐ Teflon® ☑ Polyethylene ☐ Polypropylene ☐ Other: _____

Pumping Rate: 250 mL/min Elapsed Time: 30min Volume Pumped: 2.6
Was well Evacuated? ☐ Yes ☑ No Number of Well Volumes Removed: _____
PURGING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

## SAMPLING DATA:

METHOD: ☐ Bailer, Size: ____ ☐ Bladder Pump ☐ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Syringe Sampler ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: (Pump/Bailer): ☐ Teflon® ☑ Stainless Steel
(Tubing/Rope): ☐ Teflon® ☐ Polyethylene

SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned
Metals samples field filtered? ☐ Yes ☑ No Method: _____
APPEARANCE: ☑ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: See attached form for field parameter data.

DUP : ☑ No ☐ Yes Name: _____
MS/MSD : ☑ No ☐ Yes Name: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: [signature] Date: 03/10/22

**Brown AND Caldwell**

2 Park Way, Upper Saddle River, NJ 07458
Phone: (201) 574-4700 Fax: (201) 236-1607

**NJ FIELD LAB ID# 02023**
**LOW-FLOW GROUNDWATER FIELD DATA SHEET**

Project Name: ~~D'Imparts~~ D'Imperio
Client: Br
Personnel: MHM / NL
Purge/Sample Depth:

Project Number:
Date: 03/10/22
Well ID: MW-69
Sample ID: MW-69-20220310

| Actual Time | Certified Parameters | | | | | ORP (mV) | DTW (ft) | Pumping Rate (mL/min) | Comments |
|---|---|---|---|---|---|---|---|---|---|
| | pH | Temp (°C) | Cond (mS/cm) | DO ( mg/L ) | Turbidity (NTU) | | | | |
| 1310 | 9.88 | 13.35 | 0.187 | 7.42 | 31.4 | 114 | 9.09 | 300 | |
| 1313 | 8.77 | 13.63 | 0.219 | 4.95 | 8.5 | 122 | 9.10 | | |
| 1316 | 8.06 | 13.69 | 0.232 | 3.08 | 284 | 170 | 9.10 | | |
| 1319 | 7.37 | 13.81 | 0.239 | 3.29 | 228 | 165 | 9.14 | | |
| 1322 | 7.17 | 13.86 | 0.232 | 3.24 | 189 | 164 | 9.14 | | |
| 1325 | 6.87 | 13.94 | 0.236 | 3.78 | 144 | 164 | 9.14 | | |
| 1328 | 6.56 | 14.04 | 0.230 | 3.73 | 63.1 | 175 | 9.14 | | |
| 1331 | 6.36 | 14.13 | 0.219 | 3.71 | 26.2 | 184 | 9.14 | | |
| 1334 | 6.28 | 14.20 | 0.214 | 3.70 | 19.3 | 187 | 9.14 | | |
| 1337 | 6.12 | 14.23 | 0.199 | 3.70 | 12.4 | 190 | 9.14 | | |
| 1340 | 6.01 | 14.29 | 0.186 | 3.69 | 10.1 | 191 | 9.14 | | |
| 1343 | 5.91 | 14.33 | 0.173 | 3.51 | 9.5 | 194 | 9.14 | | |
| 1346 | Collect MW-69-20220310 +Dup | | | | | | | | |

MHM

**Certified Sample Information:**
Time of Sample: 1346

Analyst Signature:

**Instrument Data:**
Manufacturer/Model: Horiba-U52
Serial No. Unit: 20UGYU56
Calibration Date/Time: 03/10/22
Serial No. Handheld: SWSH5D00

**Are low-flow parameters subject to field lab certification?** ☐ **Yes** ☐ **No (not required for CERCLA sites or sites outside of NJ)**

**If yes, low-flow data must be accompanied by a completed "Field Calibration Record, Horiba U-52" form or equivalent.**

Brown AND Caldwell

Upper Saddle River, NJ Office

# LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-64
Sample I.D.: MW-64-20220310

Project: ~~D'Imperio~~ D'Imperio
Personnel: MHM/NK

Date: 03/10/22 Time: 1310
Weather: sunny Air Temp.: 46

## WELL DATA:

Casing Diameter: 6" ☐ Stainless Steel ☑ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☑ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 9.00 ft Bottom of Well: _____ ft
DATUM: ☐ Top of Protective Casing ☑ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☐ Yes ☑ No Is well clean to bottom? ☑ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☑ Yes ☐ No
Does Weep Hole adequately drain well head? ☑ Yes ☐ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☑ Yes ☐ No
Is Padlock Functional? ☐ Yes ☐ No ☑ NA Is Inner Casing Intact? ☐ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☑ Yes ☐ No
VOLUME OF WATER: Standing in well: _____ To be purged: _____

## PURGE DATA:

METHOD: ☐ Bailer, Size: ____ ☐ Bladder Pump ☑ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: (Pump)/Bailer: ☐ Teflon® ☑ Stainless Steel ☐ PVC ☐ Other: _____
(Tubing)/Rope: ☐ Teflon® ☑ Polyethylene ☐ Polypropylene ☐ Other: _____

Pumping Rate: 300 ml/min Elapsed Time: 33 min Volume Pumped: 3.3 gal
Was well Evacuated? ☐ Yes ☑ No Number of Well Volumes Removed: _____
PURGING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

## SAMPLING DATA:

METHOD: ☐ Bailer, Size: ____ ☐ Bladder Pump ☑ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Syringe Sampler ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: (Pump)/Bailer: ☐ Teflon® ☑ Stainless Steel
(Tubing)/Rope: ☐ Teflon® ☑ Polyethylene

SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned
Metals samples field filtered? ☐ Yes ☑ No Method: _____
APPEARANCE: ☑ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: See attached form for field parameter data.

DUP : ☐ No ☑ Yes Name: DUP-20220310
MS/MSD : ☑ No ☐ Yes Name: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: _____ Date: 03/10/22

**Brown AND Caldwell**

2 Park Way, Upper Saddle River, NJ 07458
Phone: (201) 574-4700 Fax: (201) 236-1607

**NJ FIELD LAB ID# 02023**
**LOW-FLOW GROUNDWATER FIELD DATA SHEET**

Project Name: D'Imperio
Client: Br
Personnel: MH/MK
Purge/Sample Depth:

Project Number:
Date: 03/10/22
Well ID: MW-24-2-R-20220310
Sample ID:

| Actual Time | Certified Parameters | | | | | ORP (mV) | DTW (ft) | Pumping Rate (mL/min) | Comments |
|---|---|---|---|---|---|---|---|---|---|
| | pH | Temp (°C) | Cond (mS/cm) | DO ( mg/L ) | Turbidity (NTU) | | | | |
| 1412 | 6.42 | 13.18 | 0.163 | 1.16 | 16.3 | -47 | 25.57 | 250 | |
| 1415 | 6.54 | 13.26 | 0.288 | 0.00 | 12.9 | -117 | 25.57 | | |
| 1418 | 6.69 | 14.11 | 0.285 | 0.00 | 12.4 | -127 | 25.55 | | |
| 1421 | 6.73 | 14.55 | 0.288 | 0.00 | 3.7 | -142 | 25.55 | | |
| 1424 | 6.85 | 14.09 | 0.288 | 0.00 | 2.4 | -146 | 25.55 | | |
| 1427 | 6.86 | 13.84 | 0.288 | 0.00 | 1.2 | -144 | 25.55 | | |
| 1430 | 6.87 | 13.79 | 0.288 | 0.00 | 2.5 | -141 | 25.55 | | |
| 1433 | 6.87 | 13.85 | 0.286 | 0.00 | 3.3 | -140 | 25.55 | | |
| 1436 | 6.86 | 14.05 | 0.285 | 0.00 | 3.5 | -137 | 25.55 | | |
| 1439 | 6.86 | 14.23 | 0.286 | 0.00 | 3.4 | -136 | 25.55 | | |
| 1442 | 6.90 | 14.32 | 0.286 | 0.00 | 2.2 | -136 | 25.55 | | |
| 1445 | | collect sample | | MW-24-2-R-20220310 | | | | | |

**Certified Sample Information:**
Time of Sample: 1445
Analyst Signature:

**Instrument Data:**
Manufacturer/Model: Horiba-U52
Serial No. Unit: 20UGYU56
Serial No. Handheld: SWSH5D00
Calibration Date/Time: 03/10/22

**Are low-flow parameters subject to field lab certification? ☐ Yes ☐ No (not required for CERCLA sites or sites outside of NJ)**

**If yes, low-flow data must be accompanied by a completed "Field Calibration Record, Horiba U-52" form or equivalent.**

Brown AND Caldwell

Upper Saddle River, NJ Office

# LOW-FLOW GROUNDWATER SAMPLING FIELD DATA

Well Number: MW-24-2-R
Sample I.D.: MW-24-2-R-20220310

Project: D'Imperio
Personnel: MH/MK

Date: 03/10/22 Time: 1418
Weather: Sunny Air Temp.: 47

## WELL DATA:

Casing Diameter: 4" ☐ Stainless Steel ☑ Steel ☐ PVC ☐ Teflon® ☐ Other: _____
Intake Diameter: 2" ☐ Stainless Steel ☐ Galv. Steel ☑ PVC ☐ Teflon® ☐ Open rock
DEPTH TO : Static Water Level: 25.53 ft Bottom of Well: _____ ft
DATUM: ☐ Top of Protective Casing ☑ Top of Well Casing ☐ Other:
CONDITION: Is Well clearly labeled? ☐ Yes ☑ No Is well clean to bottom? ☑ Yes ☐ No
Is Prot. Casing/Surface Mount in Good Cond.? (not bent or corroded) ☑ Yes ☐ No
Does Weep Hole adequately drain well head? ☑ Yes ☐ No
Is Concrete Pad Intact? (not cracked or frost heaved) ☑ Yes ☐ No
Is Padlock Functional? ☐ Yes ☐ No ☑ NA Is Inner Casing Intact? ☐ Yes ☐ No
Is Inner Casing Properly Capped and Vented? ☑ Yes ☐ No
VOLUME OF WATER: Standing in well: _____ To be purged: _____

## PURGE DATA:

METHOD: ☐ Bailer, Size: ____ ☐ Bladder Pump ☑ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: (Pump/Bailer): ☐ Teflon® ☑ Stainless Steel ☐ PVC ☐ Other: _____
(Tubing/Rope): ☐ Teflon® ☑ Polyethylene ☐ Polypropylene ☐ Other: _____

Pumping Rate: 250 mL/min Elapsed Time: 30 min Volume Pumped: 2.5
Was well Evacuated? ☐ Yes ☑ No Number of Well Volumes Removed: _____
PURGING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

## SAMPLING DATA:

METHOD: ☐ Bailer, Size: ____ ☐ Bladder Pump ☑ 2" Submersible Pump ☐ 4" Submersible Pump
☐ Syringe Sampler ☐ Peristaltic Pump ☐ Inertial Lift Pump ☐ Other: _____

MATERIALS: (Pump/Bailer): ☐ Teflon® ☑ Stainless Steel
(Tubing/Rope): ☐ Teflon® ☑ Polyethylene

SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned
Metals samples field filtered? ☐ Yes ☑ No Method: _____
APPEARANCE: ☑ Clear ☐ Turbid ☐ Color: _____ ☐ Contains Immiscible Liquid
FIELD DETERMINATIONS: See attached form for field parameter data.

DUP : ☑ No ☐ Yes Name: _____
MS/MSD : ☑ No ☐ Yes Name: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: [signature] Date: 03/14/22

# ATTACHMENT 3

## Hydraulic Monitoring Data

**D'Imperio Property Site**
**Semi-Annual (1H-2022)**
**Groundwater Sampling Report**

LONG-TERM HYDRAULIC MONITORING
FIELD DATA SHEET
D'Imperio Property Site

Date: 3/8/2022

| Well ID | Reference Point | Depth to Water (ft.) | Screen Zone | Well Depth (ft.) | Reference Elevation (ft,ngvd) | Comments |
|---|---|---|---|---|---|---|
| MW-20-1-R | TOIC | 18.55 | Tbr | 42 | 64.84 | |
| 20-2 | TOIC | 16.99 | Tbr | 28 | 64.66 | |
| MW-20-3-R | TOIC | 16.98 | Tuco | 63 | 64.92 | |
| 23-1 | TOIC | 18.35 | Tbr | 26 | 65.30 | |
| 23-2 | TOIC | 20.02 | Tuco | 62 | 65.67 | |
| 24-1 | TOIC | 23.78 | Tbr | 29 | 69.63 | |
| MW-24-2-R | TOIC | 25.56 | Tuco | 63 | 70.36 | |
| MW-25-1-R | TOIC | 17.11 | Tbr | 24 | 64.06 | |
| 25-2 | TOIC | 19.09 | Tuco | 60 | 64.61 | |
| 26-2 | TOIC | 28.55 | Tuco | 75 | 74.09 | |
| MW-28-1 | TOIC | 29.40 | Tbr | 41 | 73.45 | |
| MW-28-2 | TOIC | 29.49 | Tuco | 93 | 72.98 | |
| MW-29-A | TOIC | 18.06 | Tbr | 42 | 58.52 | |
| MW-29-1 | TOIC | 19.12 | Tuco | 65 | 60.80 | |
| MW-29-2 | TOIC | 19.02 | Tlco | 140 | 59.26 | |
| MW-31-A | TOIC | 16.22 | Tbr | 37.5 | 57.61 | |
| MW-31-1 | TOIC | 18.48 | Tuco | 65 | 58.95 | |
| MW-31-2 | TOIC | 18.59 | Tlco | 130 | 57.78 | |
| MW-32 | TOIC | 14.31 | Tlco | 130 | 53.57 | |
| MW-33-1 | TOIC | 13.68 | Tuco | 55 | 53.74 | |
| MW-33-2 | TOIC | 13.62 | Tuco | 130 | 51.86 | |
| MW-34 | TOIC | 19.86 | Tuco | 70 | 61.66 | |
| MW-35 | TOIC | 20.32 | Tuco | 68 | 62.18 | |
| MW-36 | TOIC | 23.46 | Tuco | 72 | 65.76 | |

LONG-TERM HYDRAULIC MONITORING
FIELD DATA SHEET

Date: 3/8/2022

D'Imperio Property Site

| Well ID | Reference Point | Depth to Water (ft.) | Screen Zone | Well Depth (ft.) | Reference Elevation (ft,ngvd) | Comments |
|---|---|---|---|---|---|---|
| MW-37 | TOIC | 25.61 | Tuco | 74 | 67.92 | |
| MW-38 | TOIC | 26.10 | Tuco | 74 | 68.51 | |
| MW-39 | TOIC | 24.66 | Tuco | 76 | 67.00 | |
| MW-40 | TOIC | 21.63 | Tbr | 47 | 68.18 | |
| MW-41 | TOIC | 32.60 | Tbr | 46 | 78.13 | |
| MW-42 | TOIC | 29.62 | Tbr | 44 | 74.80 | |
| MW-43 | TOIC | 24.46 | Tbr | 43 | 71.03 | |
| MW-44-1 | TOIC | 9.99 | Tbr | 20 | 58.77 | |
| MW-44-2 | TOIC | 12.32 | Tuco | 72 | 58.89 | |
| MW-45 | TOIC | 14.13 | Tlco | 125 | 51.18 | |
| MW-46 | TOIC | 14.62 | Tlco | 118 | 52.04 | |
| MW-47 | TOIC | 15.45 | Tlco | 125 | 52.56 | |
| MW-48 | TOIC | 36.53 | Tuco | 80 | 79.63 | |
| MW-49 | TOIC | 22.18 | Tuco | 80 | 64.17 | |
| MW-50 | TOIC | 12.68 | Tlco | 131 | 50.32 | |
| MW-51 | TOIC | 17.06 | Tlco | 127 | 54.65 | |
| MW-52 | TOIC | 18.78 | Tbr | 42 | 66.56 | |
| MW-53 | TOIC | 16.66 | Tlco | 128 | 54.13 | |
| MW-54 | TOIC | 11.78 | Tlco | 130 | 49.48 | |
| MW-55 | TOIC | 15.09 | Tlco | 128 | 51.79 | |
| MW-56 | TOIC | 16.24 | Tlco | 128 | 52.58 | |
| MW-57 | TOIC | 14.44 | Tlco | 128 | 50.69 | |
| MW-58 | TOIC | 15.16 | Tlco | 128 | 52.97 | |
| MW-59 | TOIC | 12.49 | Tlco | 120 | 48.94 | |
| MW-60 | TOIC | 13.13 | Tlco | 169 | 49.26 | |

LONG-TERM HYDRAULIC MONITORING
FIELD DATA SHEET

Date: 3/8/2022 D'Imperio Property Site

| Well ID | Reference Point | Depth to Water (ft.) | Screen Zone | Well Depth (ft.) | Reference Elevation (ft,ngvd) | Comments |
|---|---|---|---|---|---|---|
| MW-64 | TOIC | 19.50 | Tlco | 177 | 54.22 | |
| MW-65 | TOIC | 22.52 | Tlco | 177 | 56.30 | |
| MW-66 | TOIC | 11.98 | Tlco | 172 | 47.79 | |
| MW-67 | TOIC | 21.20 | Tlco | 182 | 57.00 | |
| MW-68 | TOIC | 10.49 | Tlco | 130 | 45.61 | Well level equilibrated |
| MW-69 | TOIC | 9.03 | Tlco | 160 | 43.44 | Well level equilibrated |
| MW-70 | TOIC | 14.86 | Tlco | 165 | 48.35 | Well level equilibrated |
| MW-71 | TOIC | 21.96 | Tlco | 165 | 55.55 | Well level equilibrated |
| MW-72 | TOIC | 21.88 | Tlco | 185 | 55.21 | Well level equilibrated |
| MW-73 | TOIC | 21.02 | Tlco | 170 | 53.56 | Well level equilibrated |
| MW-74 | TOIC | 22.10 | Tlco | 170 | 55.15 | Well level equilibrated |
| MW-75 | TOIC | 14.50 | Tlco | 160 | 46.29 | Well level equilibrated |
| MW-76 | TOIC | 14.85 | Tlco | 160 | 46.33 | Well level equilibrated |
| MW-77 | TOIC | 18.01 | Tlco | 160 | 49.51 | Well level equilibrated |
| MW-78 | TOIC | 19.28 | Tlco | 160 | 50.98 | Well level equilibrated |
| MW-79 | TOIC | 17.42 | Tlco | 165 | 48.80 | Well level equilibrated |
| MW-80 | TOIC | 13.16 | Tlco | 160 | 44.61 | Well level equilibrated |
| OBW-LC-2-E | TOIC | 13.55 | Tlco | 128 | 50.25 | |
| OBW-LC-3-E | TOIC | 14.12 | Tlco | 128 | 50.51 | |
| OBW-LC-4-E | TOIC | 13.61 | Tlco | 128 | 49.78 | |
| OBW-LC-5-E | TOIC | 12.51 | Tlco | 128 | 48.52 | |
| OBW-LC-6-E | TOIC | 23.48 | Tlco | 182 | 59.00 | |
| OBW-LC-7-E | TOIC | 12.26 | Tlco | 130 | 43.55 | |
| OBW-LC-8-E | TOIC | 16.31 | Tlco | 133 | 47.35 | |
| OBW-LC-9-E | TOIC | 19.25 | Tlco | 136 | 50.55 | |

LONG-TERM HYDRAULIC MONITORING
FIELD DATA SHEET

Date: 3/8/2022 D'Imperio Property Site

| Well ID | Reference Point | Depth to Water (ft.) | Screen Zone | Well Depth (ft.) | Reference Elevation (ft,ngvd) | Comments |
|---|---|---|---|---|---|---|
| OBW-LC-2-R | TOIC | 14.32 | Tlco | 125 | 60.06 | |
| OBW-61 | TOIC | 13.35 | Tlco | 128 | 49.70 | |
| OBW-62 | TOIC | 15.96 | Tlco | 128 | 52.26 | |
| OBW-63 | TOIC | 13.73 | Tlco | 128 | 50.04 | |
| BR-1-E | int. tube | 15.46 | Tbr | 45 | 62.58 | |
| BR-2-E | int. tube | 15.70 | Tbr | 46 | 63.03 | |
| BR-3-E | int. tube | 38.71 | Tbr | 52 | 72.24 | |
| BR-4-E | int. tube | 14.35 | Tbr | 46 | 62.70 | |
| UC-1-E | int. tube | 16.08 | Tuco | 99 | 62.66 | |
| UC-2-E | int. tube | 18.08 | Tuco | 83.5 | 63.69 | |
| UC-3-E | int. tube | 28.21 | Tuco | 94 | 72.99 | |
| UC-4-E | int. tube | 37.22 | Tuco | 96 | 75.63 | |
| UC-6-E | int. tube | 35.71 | Tuco | 93 | 61.24 | |
| LC-1-E | int. tube | 12.17 | Tlco | 165 | 53.17 | |
| LC-2-E | int. tube | 18.23 | Tlco | 139.5 | 52.20 | |
| LC-3-E | int. tube | 19.59 | Tlco | 139.5 | 51.23 | |
| LC-4-E | int. tube | 20.61 | Tlco | 139.5 | 51.71 | |
| LC-5-E | int. tube | 16.98 | Tlco | 139.5 | 49.97 | |
| LC-7-E | int. tube | 12.74 | Tlco | 138 | 42.10 | |
| LC-8-E | int. tube | 17.33 | Tlco | 141 | 45.50 | |
| LC-9-E | int. tube | 20.92 | Tlco | 144 | 48.92 | |
| BR-1-R | int. tube | 16.89 | Tbr | 38.5 | 67.04 | |
| BR-2-R | int. tube | 17.12 | Tbr | 36 | 65.65 | |
| BR-3-R | int. tube | 17.07 | Tbr | 52.25 | 65.55 | Press. On Head |
| UC-1-R | int. tube | Ø | Tuco | 71.5 | 59.31 | 9.5 psi |

LONG-TERM HYDRAULIC MONITORING
FIELD DATA SHEET

Date: 3/8/2022 D'Imperio Property Site

| Well ID | Reference Point | Depth to Water (ft.) | Screen Zone | Well Depth (ft.) | Reference Elevation (ft,ngvd) | Comments |
|---|---|---|---|---|---|---|
| UC-2-R | int. tube | 0 | Tuco | 84 | 61.54 | 7.5 psi |
| UC-3-R | int. tube | 0 | Tuco | 78 | 59.98 | 8.5 psi |
| UC-4-R | int. tube | 0 | Tuco | 86 | 62.67 | 8.0 psi |
| UC-5-R | int. tube | 0 | Tuco | 92 | 62.95 | 6.0 psi |
| UC-6-R | int. tube | 0 | Tuco | 78 | 62.14 | 9.5 psi |
| LC-1-R | int. tube | 0 | Tlco | 163 | 64.04 | 0.1 psi |
| LC-2-R | int. tube | 0 | Tlco | 155 | 61.09 | 13 psi |
| LC-3-R | int. tube | 9.58 | Tlco | | | 0 psi |
| PZ-45 | TOIC | 21.35 | Tuco | 80 | 68.23 | |
| PZ-46 | TOIC | 19.97 | Tuco | 80 | 68.23 | |

Water Level Instrument: SOLINIST TOIC - Top of Inner Casing TOC - Top of Outer Casing

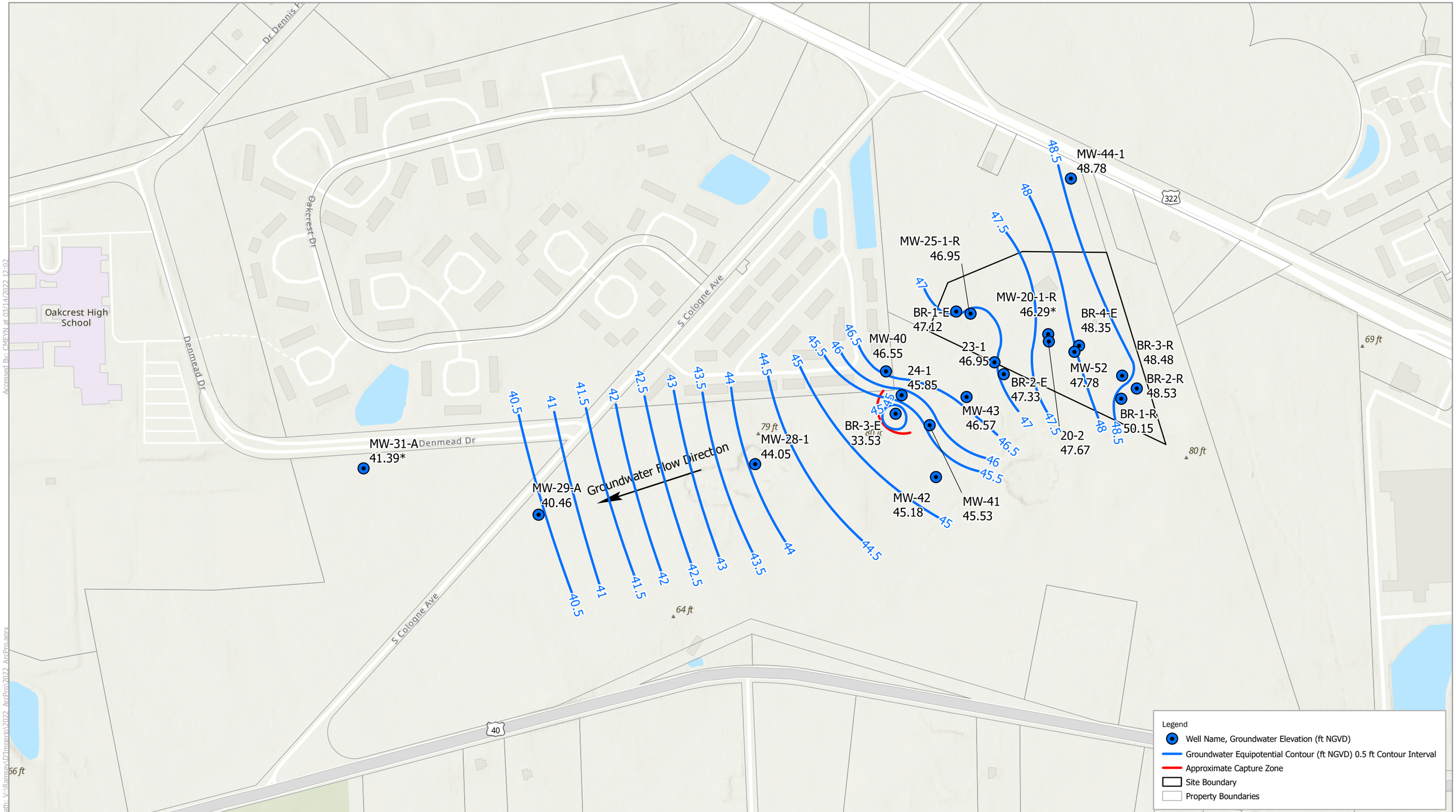
I certify that the water level data were measured and recorded in accordance with applicable regulatory and project protocols.

NAME Stephen Borton (PRINTED) SIGNATURE _____ (SIGNED) DATE 3/8/2022

# ATTACHMENT 4

## Groundwater Mapping
## Potentiometric Surface/Plume Maps

**D'Imperio Property Site**
**Semi-Annual (1H-2022)**
**Groundwater Sampling Report**




Brown AND Caldwell

de maximis, inc. 156145

**D'IMPERIO PROPERTY SITE,**
**HAMILTON TWP,**
**ATLANTIC CO. NEW JERSEY**

Date: 3/14/2022 12:00 PM

Notes: * indicates a value that is considered anomalous. Value not used for contouring

Spatial Reference:
Name: NAD 1983 StatePlane New Jersey FIPS 2900 Feet

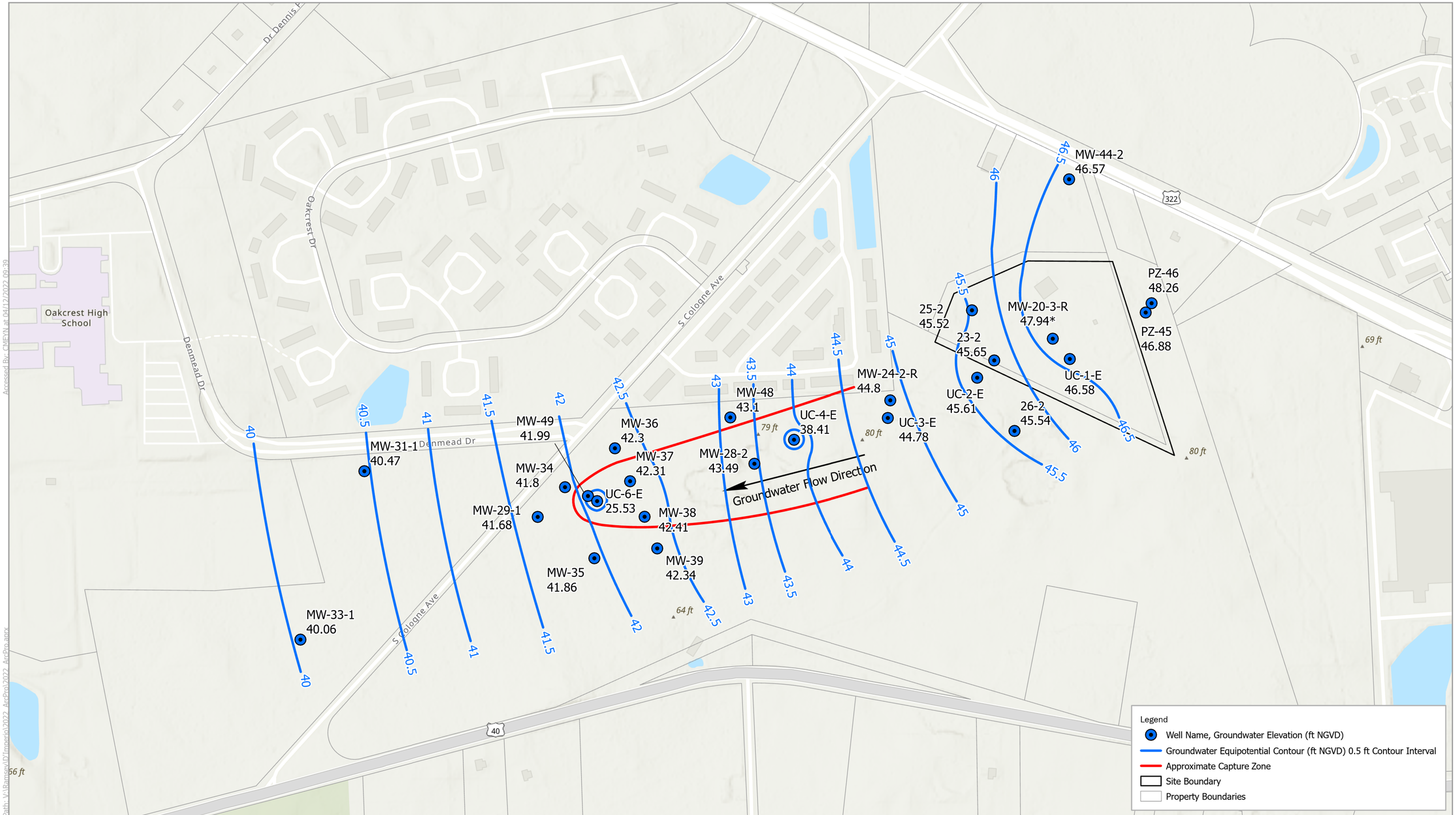
Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community, Esri Community Maps Contributors, New Jersey Office of GIS, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc., METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA

Drawn By: Charles Meyn
Checked By: James Marolda

N

0 200 400 800 Feet

# FIGURE 2-1
# BRIDGETON AQUIFER
# GROUNDWATER EQUIPOTENTIAL CONTOURS
# MARCH 08, 2022




Accessed By: CMEYN at 04/12/2022 09:39

Path: V:\Ramsey\D'Imperio\2022_ArcPro\2022_ArcPro.aprx

Brown AND Caldwell

de maximis, inc. 156145

**D'IMPERIO PROPERTY SITE, HAMILTON TWP, ATLANTIC CO. NEW JERSEY**

Date: 4/12/2022 9:34 AM

Notes: * indicates a value that is considered anomalous. Value not used for contouring

Spatial Reference:
Name: NAD 1983 StatePlane New Jersey FIPS 2900 Feet

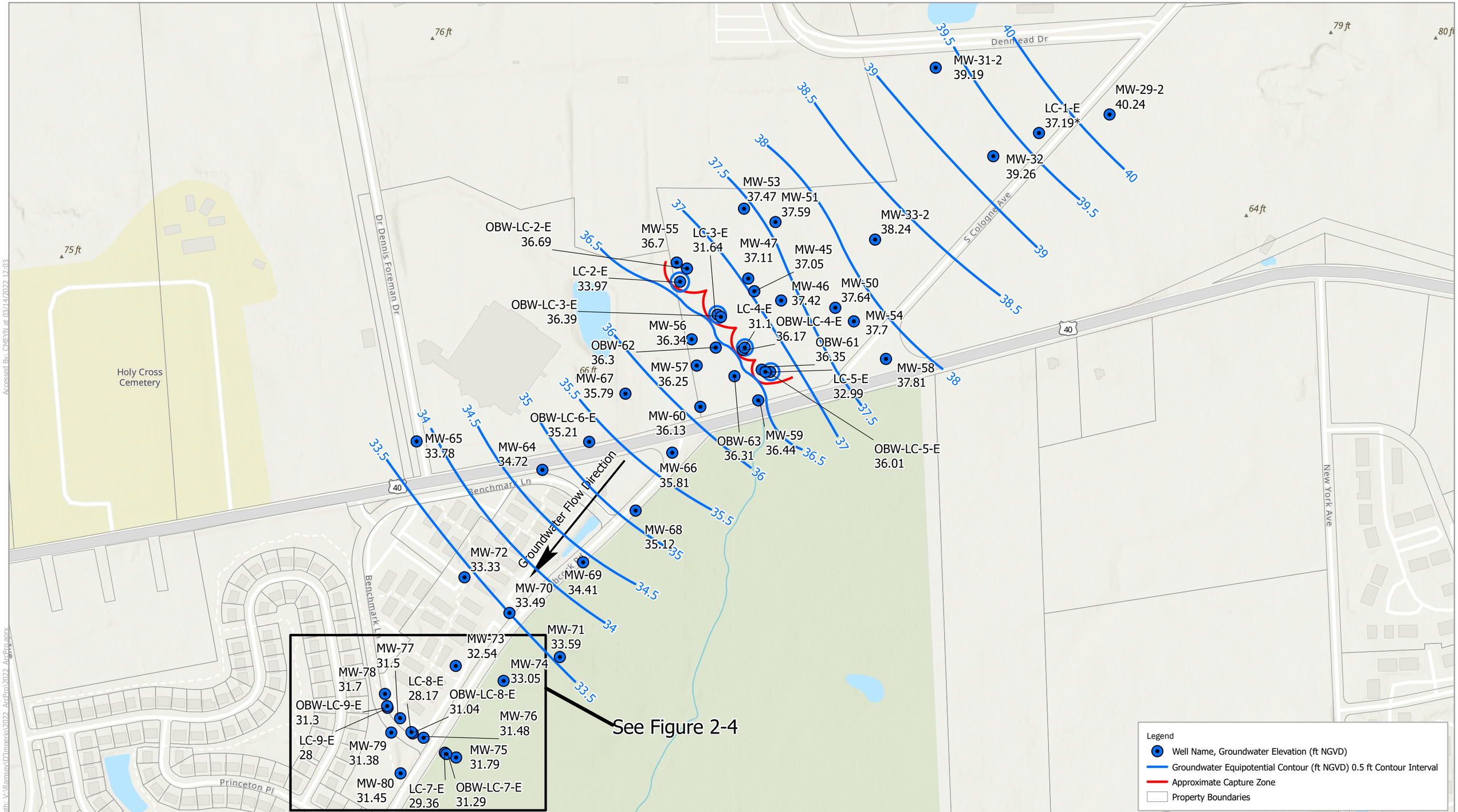


Drawn By: Charles Meyn
Checked By: James Marolda

N

0 200 400 800 Feet

FIGURE 2-2
UPPER COHANSEY AQUIFER
GROUNDWATER EQUIPOTENTIAL CONTOURS
MARCH 8, 2022




Brown AND Caldwell

de maximis, inc. 156145

**D'IMPERIO PROPERTY SITE, HAMILTON TWP, ATLANTIC CO. NEW JERSEY**

Date: 3/14/2022 12:00 PM

Notes: * indicates a value that is considered anomalous. Value not used for contouring

Spatial Reference:
Name: NAD 1983 StatePlane New Jersey FIPS 2900 Feet

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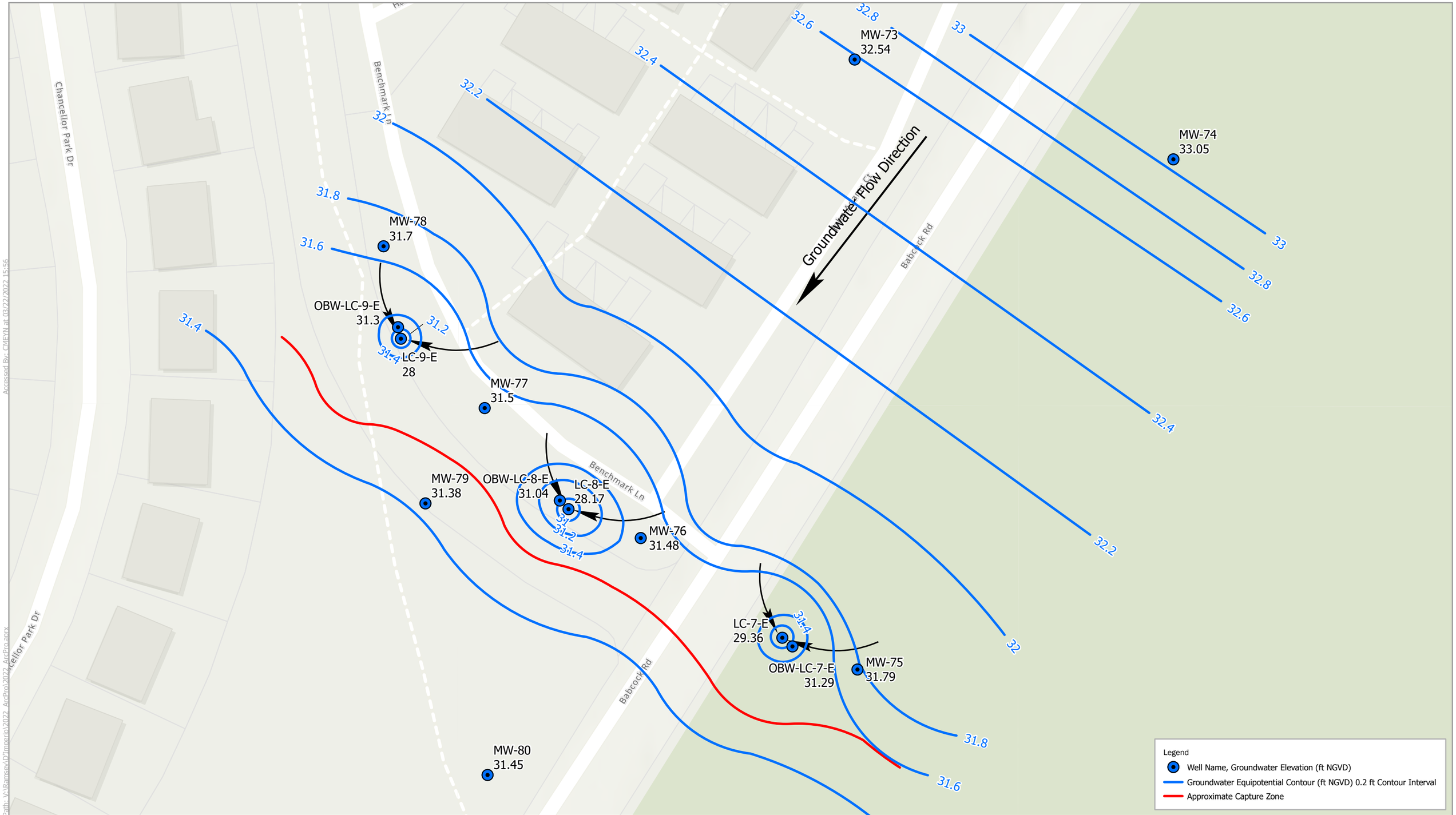
Drawn By: Charles Meyn
Checked By: James Marolda

N

0 200 400 800 Feet

# FIGURE 2-3
# LOWER COHANSEY AQUIFER GROUNDWATER EQUIPOTENTIAL CONTOURS MARCH 8, 2022




Brown AND Caldwell

de maximis, inc. 156145

**D'IMPERIO PROPERTY SITE,**
**HAMILTON TWP,**
**ATLANTIC CO. NEW JERSEY**

Date: 3/22/2022 3:55 PM

Spatial Reference:
Name: NAD 1983 StatePlane New Jersey FIPS 2900 Feet



Drawn By: Charles Meyn
Checked By: James Marolda

N

0 30 60 120 Feet

# FIGURE 2-4
# LOWER COHANSEY AQUIFER GROUNDWATER EQUIPOTENTIAL CONTOURS MARCH 8, 2022

# ATTACHMENT 5

## Semi-Annual (1H-2022)
## Groundwater Sampling Data
## Summary Tables

**D'Imperio Property Site**
**Semi-Annual (1H-2022)**
**Groundwater Sampling Report**

D'Imperio Property Site
Semi-Annual (1H-2022)
LCDP - Influent, Plume and Sentinel Wells

| ***Sample Date*** | | ***3/11/2022*** | ***3/10/2022*** | ***3/10/2022*** | ***3/10/2022*** | ***3/10/2022*** | ***3/7/2022*** | ***3/7/2022*** | ***3/7/2022*** | ***3/7/2022*** | ***3/4/2022*** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds** | **D'Imperio Groundwater Performance Standards (ug/L)** | **LCDP Detached Influent LCDP-7,8,9 (ug/L)** | **L. Cohansey Monitoring LCDP Well MW-69 (ug/L)** | **L. Cohansey Monitoring LCDP Well MW-70 (ug/L)** | **L. Cohansey Monitoring LCDP Well MW-71 (ug/L)** | **L. Cohansey Monitoring LCDP Well MW-73 (ug/L)** | **L. Cohansey Monitoring LCDP Well MW-74 (ug/L)** | **L. Cohansey Monitoring Sentinel Well MW-79 (ug/L)** | **L. Cohansey Monitoring Sentinel Well MW-80 (ug/L)** | **Field Blank (ug/L)** | **Trip Blank (ug/L)** |
| Benzene | 5 (a) | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Butanone (MEK) | 100 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chlorobenzene | (a) | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloroform | 5 (a) | 2.4 | 3.2 | 2.6 | 4.3 | 0.39 J | 0.86 J | 0.65 J | 0.91 J | 2.5 | ND |
| 1,1-Dichloroethane | (a) | ND | 0.73 J | 0.50 J | 0.46 J | ND | ND | ND | ND | ND | ND |
| 1,2-Dichloroethane | 5 (a) | ND | 3.7 | 2.9 | 1.5 | ND | ND | ND | ND | ND | ND |
| 1,1-Dichloroethene | 5 (a) | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichloroethene | (a) | ND | 3.4 | 1.5 | 2.0 | ND | ND | ND | ND | ND | ND |
| 1,2-Dichloropropane | (a) | ND | 6.1 | 3.2 | 5.3 | ND | ND | ND | ND | ND | ND |
| Ethylbenzene | (a) | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Methylene chloride | 5 (a) | ND | ND | ND | ND | ND | NA | ND | ND | ND | ND |
| Tetrachloroethene | 5 (a) | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Toluene | (a) | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,1-Trichloroethane | 200 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Trichloroethene | 5 (a) | 1.5 | 2.7 | 2.8 | 0.89 J | ND | ND | ND | ND | ND | ND |
| Vinyl Chloride | - | ND | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| ***Total VOCs*** | | ***3.9*** | ***19.83 J*** | ***13.5 J*** | ***14.45 J*** | ***0.39 J*** | ***0.86 J*** | ***0.65 J*** | ***0.91 J*** | ***2.5*** | ***ND*** |
| | | | | | | | | | | | |
| *1,4-Dioxane* | *-* | *NA* | *NA* | *NA* | *NA* | *NA* | *NA* | *NA* | *NA* | *NA* | *NA* |

(a): NJDEP compounds - The sum of all (a) designated compounds may not exceed 50 ug/L.

ND: compound was not detected in the analysis.

NA: compound was not analyzed.

J: The presence of a "J" indicates that the analyte was positively identified but the value is an approximate concentration.

UJ: The presence of a "UJ" indicates that the reported result is not above the sample reporting limit and the limit is approximate.

Shaded cell with parameter concentration indicates exceedance.

D'Imperio Property Site
Semi-Annual (1H-2022)
LC Main Plume Influent, Sentinel/Observation Wells

| ***Sample Date*** | | ***3/11/2022*** | ***3/9/2022*** | ***3/8/2022*** | ***3/9/2022*** | ***3/8/2022*** | ***3/8/2022*** | ***3/11/2022*** | ***3/8/2022*** |
|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds** | **D'Imperio Groundwater Performance Standards (ug/L)** | **L. Cohansey Main Plume Influent LCDP-2,3,4,5 (ug/L)** | **L. Cohansey Monitoring Sentinel Well MW-55 (ug/L)** | **L. Cohansey Monitoring Sentinel Well MW-56 (ug/L)** | **L. Cohansey Monitoring Sentinel Well MW-59 (ug/L)** | **L. Cohansey Observation Well OBW-62 (ug/L)** | **L. Cohansey Observation Well OBW-63 (ug/L)** | **Trip Blank (ug/L)** | **Field Blank (ug/L)** |
| Benzene | 5 (a) | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Butanone (MEK) | 100 | ND | ND | ND | ND | ND | ND | ND | ND |
| Chlorobenzene | (a) | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloroform | 5 (a) | 3.1 | 1.1 | 2.0 | 2.9 | 2.3 | 1.2 | ND | 2.4 |
| 1,1-Dichloroethane | (a) | 0.48 J | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichloroethane | 5 (a) | 3.1 | ND | ND | ND | ND | ND | ND | ND |
| 1,1-Dichloroethene | 5 (a) | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichloroethene | (a) | 2.5 | ND | ND | ND | 0.61 J | ND | ND | ND |
| 1,2-Dichloropropane | (a) | 3.8 | ND | 0.79 J | ND | 2.3 | ND | ND | ND |
| Ethylbenzene | (a) | ND | ND | ND | ND | ND | ND | ND | ND |
| Methylene chloride | 5 (a) | ND | ND | ND | ND | ND | ND | ND | ND |
| Tetrachloroethene | 5 (a) | ND | ND | ND | ND | ND | ND | ND | ND |
| Toluene | (a) | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,1-Trichloroethane | 200 | ND | ND | ND | ND | ND | ND | ND | ND |
| Trichloroethene | 5 (a) | 0.53 J | ND | ND | ND | ND | ND | ND | ND |
| Vinyl Chloride | - | ND | NA | NA | NA | NA | NA | NA | NA |
| ***Total VOCs*** | | ***13.51 J*** | ***1.1*** | ***2.79 J*** | ***2.9*** | ***5.21 J*** | ***1.2*** | ***ND*** | ***2.4*** |
| | | | | | | | | | |
| *1,4-Dioxane* | - | *NA* | *NA* | *NA* | *NA* | *NA* | *NA* | *NA* | *NA* |

(a): NJDEP compounds - The sum of all (a) designated compounds may not exceed 50 ug/L.

ND: compound was not detected in the analysis.

NA: compound was not analyzed.

J: The presence of a "J" indicates that the analyte was positively identified but the value is an approximate concentration.

UJ: The presence of a "UJ" indicates that the reported result is not above the sample reporting limit and the limit is approximate.

Shaded cell with parameter concentration indicates exceedance.

# D'Imperio Property Site
# Semi-Annual 1H-2022
# Upper Cohansey Wells and Combined BR/UC Influent

| ***Sample Date*** | | ***03/11/22*** | ***3/10/2022*** | ***3/9/2022*** | ***3/8/2022*** | ***3/11/2022*** | ***3/10/2022*** |
|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds** | **D'Imperio Groundwater Performance Standards (ug/L)** | **Bridgeton - U. Cohansey Influent BR/UC Inf (ug/L)** | **U. Cohansey Monitoring Plume Well MW-24-2R (ug/L)** | **U. Cohansey Monitoring Plume Well MW-28-2 (ug/L)** | **U. Cohansey Monitoring Sentinel Well MW-49 (ug/L)** | **Trip Blank (ug/L)** | **Field Blank (ug/L)** |
| Benzene | 5 (a) | ND | 1.2 | 0.42 J | ND | ND | ND |
| 2-Butanone (MEK) | 100 | ND | ND | ND | ND | ND | ND |
| Chlorobenzene | (a) | ND | ND | ND | ND | ND | ND |
| Chloroform | 5 (a) | 8.1 | ND | ND | 6.1 | ND | 2.3 |
| 1,1-Dichloroethane | (a) | 0.62 J | 1.1 | 0.43 J | ND | ND | ND |
| 1,2-Dichloroethane | 5 (a) | 0.96 J | 0.66 J | 1.7 | ND | ND | ND |
| 1,1-Dichloroethene | 5 (a) | ND | ND | ND | ND | ND | ND |
| 1,2-Dichloroethene | (a) | 1.1 | 4.2 | 3.5 | ND | ND | ND |
| 1,2-Dichloropropane | (a) | 1.7 | ND | 1.4 | ND | ND | ND |
| Ethylbenzene | (a) | 1.2 | 8.5 | ND | ND | ND | ND |
| Methylene chloride | 5 (a) | ND | ND | ND | ND | ND | ND |
| Tetrachloroethene | 5 (a) | ND | ND | ND | ND | ND | ND |
| Toluene | (a) | ND | 0.82 J | ND | ND | ND | ND |
| 1,1,1-Trichloroethane | 200 | ND | ND | ND | ND | ND | ND |
| Trichloroethene | 5 (a) | ND | ND | 0.73 J | ND | ND | ND |
| Vinyl Chloride | - | ND | NA | NA | NA | NA | NA |
| ***Total VOCs*** | | ***13.68 J*** | ***16.28 J*** | ***7.45 J*** | ***6.1*** | ***ND*** | ***1.2*** |
| | | | | | | | |
| *1,4-Dioxane* | - | *NA* | *NA* | *NA* | *NA* | *NA* | *NA* |

(a): NJDEP compounds - The sum of all (a) designated compounds may not exceed 50 ug/L.

ND: compound was not detected in the analysis.

J: The presence of a "J" indicates that the analyte was positively identified but the value is an approximate concentration.

UJ: The presence of a "UJ" indicates that the reported result is not above the sample reporting limit and the limit is approximate.

Shaded cell with parameter concentration indicates exceedance.

# D'Imperio Property Site
## Semi-Annual 1H-2022
## Bridgeton Wells and Quarterly Effluent

| ***Sample Date*** | | ***3/11/2022*** | ***3/8/2022*** | ***3/9/2022*** | ***3/8/2022*** | ***3/9/2022*** | ***03/11/22*** | ***3/9/2022*** | ***3/9/2022*** |
|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds** | **D'Imperio Groundwater Performance Standards (ug/L)** | **Bridgeton Extraction Well BR-3E (ug/L)** | **Bridgeton Monitoring Plume Well MW-24-1R (ug/L)** | **Bridgeton Monitoring Sentinel Well MW-28-1 (ug/L)** | **Bridgeton Monitoring X-Grad Well MW-41 (ug/L)** | **Bridgeton Monitoring Plume Well MW-43 (ug/L)** | **Treatment Plant Reinjection Effluent (ug/L)** | **Trip Blank (ug/L)** | **Field Blank (ug/L)** |
| Benzene | 5 (a) | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Butanone (MEK) | 100 | ND | NA | NA | ND | ND | ND | ND | ND |
| Chlorobenzene | (a) | ND | NA | NA | ND | ND | ND | ND | ND |
| Chloroform | 5 (a) | 16 | 34 | 32 | 5.2 | ND | ND | ND | 2.6 |
| 1,1-Dichloroethane | (a) | 0.96 J | ND | ND | ND | 3.6 | ND | ND | ND |
| 1,2-Dichloroethane | 5 (a) | 2.5 | ND | ND | ND | ND | ND | ND | ND |
| 1,1-Dichloroethene | 5 (a) | ND | ND | ND | ND | 0.69 J | ND | ND | ND |
| 1,2-Dichloroethene | (a) | 1.4 | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichloropropane | (a) | 1.4 | ND | ND | ND | ND | ND | ND | ND |
| Ethylbenzene | (a) | 5.0 | ND | ND | ND | ND | ND | ND | ND |
| Methylene chloride | 5 (a) | ND | NA | NA | ND | ND | ND | ND | ND |
| Tetrachloroethene | 5 (a) | ND | ND | ND | ND | ND | ND | ND | ND |
| Toluene | (a) | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,1-Trichloroethane | 200 | ND | ND | ND | ND | ND | ND | ND | ND |
| Trichloroethene | 5 (a) | 0.35 J | ND | ND | ND | ND | ND | ND | ND |
| Vinyl Chloride | - | ND | ND | NA | NA | NA | NA | NA | NA |
| ***Total VOCs*** | | ***27.61 J*** | ***34*** | ***32*** | ***5.2*** | ***4.29 J*** | ***ND*** | ***ND*** | ***2.6*** |
| | | | | | | | | | |
| *1,4-Dioxane* | - | *NA* | *NA* | *NA* | *NA* | *NA* | *NA* | *NA* | *NA* |
| | | | | | | | *Method 8270 SIM* | | |

(a): NJDEP compounds - The sum of all (a) designated compounds may not exceed 50 ug/L.

ND: compound was not detected in the analysis.

NA: compound was not analyzed.

J: The presence of a "J" indicates that the analyte was positively identified but the value is an approximate concentration.

UJ: The presence of a "UJ" indicates that the reported result is not above the sample reporting limit and the limit is approximate.

Shaded cell with parameter concentration indicates exceedance.

# ATTACHMENT 6

## Laboratory Data Analysis Reports

**D'Imperio Property Site**
**Semi-Annual (1H-2022)**
**Groundwater Sampling Report**

eurofins | Environment Testing America

# ANALYTICAL REPORT

Eurofins Lancaster Laboratories Env, LLC
2425 New Holland Pike
Lancaster, PA 17601
Tel: (717)656-2300

Laboratory Job ID: 410-72267-1
Client Project/Site: D'Imperio Property Site Quarterly

For:
O & M Inc.
450 Montbrook Lane
Knoxville, Tennessee 37919-2705

Attn: Mr. Tom Thomas

Barb Weyandt

*Authorized for release by:*
*2/14/2022 7:52:36 PM*

Barbara Weyandt, Project Manager
(717)556-7264
Barbara.Weyandt@eurofinset.com

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.
· QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
· Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
· Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied, except as otherwise agreed. We disclaim any other warranties, expressed or implied, including a warranty of fitness for particular purpose and warranty of merchantability. In no event shall Eurofins Lancaster Laboratories Environmental, LLC be liable for indirect, special, consequential, or incidental damages including, but not limited to, damages for loss of profit or goodwill regardless of (A) the negligence (either sole or concurrent) of Eurofins Lancaster Laboratories Environmental and (B) whether Eurofins Lancaster Laboratories Environmental has been informed of the possibility of such damages. We accept no legal responsibility for the purposes for which the client uses the test results. Except as otherwise agreed, no purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Barb Weyandt

Barbara Weyandt
Project Manager
*2/14/2022 7:52:36 PM*

# Table of Contents

# Definitions/Glossary

Client: O & M Inc. Job ID: 410-72267-1
Project/Site: D'Imperio Property Site Quarterly

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| 1C | Result is from the primary column on a dual-column method. |
| 2C | Result is from the confirmation column on a dual-column method. |
| CFL | Contains Free Liquid |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |
| TNTC | Too Numerous To Count |

# Case Narrative

Client: O & M Inc.
Job ID: 410-72267-1
Project/Site: D'Imperio Property Site Quarterly

## Job ID: 410-72267-1

**Laboratory: Eurofins Lancaster Laboratories Env, LLC**

**Narrative**

**Job Narrative**
**410-72267-1**

**Receipt**

The sample was received on 2/9/2022 6:15 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C

**GC/MS Semi VOA**

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

# Detection Summary

Client: O & M Inc.
Job ID: 410-72267-1
Project/Site: D'Imperio Property Site Quarterly

## Client Sample ID: EFF/220209
## Lab Sample ID: 410-72267-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | 3.4 | | 0.30 | 0.10 | ug/L | 1 | | 8270E SIM | Total/NA |

This Detection Summary does not include radiochemical test results.

Client: O & M Inc.
Job ID: 410-72267-1
Project/Site: D'Imperio Property Site Quarterly

**Client Sample ID: EFF/220209**
**Lab Sample ID: 410-72267-1**
**Date Collected: 02/09/22 10:37**
**Matrix: Groundwater**
**Date Received: 02/09/22 18:15**

**Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | 3.4 | | 0.30 | 0.10 | ug/L | | 02/11/22 09:44 | 02/11/22 23:40 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Benzo(a)pyrene-d12 (Surr)* | *69* | | *10 - 110* | *02/11/22 09:44* | *02/11/22 23:40* | *1* |
| *Fluoranthene-d10 (Surr)* | *93* | | *47 - 128* | *02/11/22 09:44* | *02/11/22 23:40* | *1* |
| *1-Methylnaphthalene-d10 (Surr)* | *77* | | *36 - 111* | *02/11/22 09:44* | *02/11/22 23:40* | *1* |

# Surrogate Summary

Client: O & M Inc.
Job ID: 410-72267-1
Project/Site: D'Imperio Property Site Quarterly

## Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

**Matrix: Groundwater**
**Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | BAPd12 | FLN10 | MNPd10 | | | | | | |
| Lab Sample ID | Client Sample ID | (10-110) | (47-128) | (36-111) | | | | | | |
| 410-72267-1 | EFF/220209 | 69 | 93 | 77 | | | | | | |

**Surrogate Legend**

BAPd12 = Benzo(a)pyrene-d12 (Surr)
FLN10 = Fluoranthene-d10 (Surr)
MNPd10 = 1-Methylnaphthalene-d10 (Surr)

## Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

**Matrix: Water**
**Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | BAPd12 | FLN10 | MNPd10 | | | | | | |
| Lab Sample ID | Client Sample ID | (10-110) | (47-128) | (36-111) | | | | | | |
| LCS 410-223026/2-A | Lab Control Sample | 94 | 95 | 76 | | | | | | |
| MB 410-223026/1-A | Method Blank | 83 | 93 | 80 | | | | | | |

**Surrogate Legend**

BAPd12 = Benzo(a)pyrene-d12 (Surr)
FLN10 = Fluoranthene-d10 (Surr)
MNPd10 = 1-Methylnaphthalene-d10 (Surr)

Client: O & M Inc.
Job ID: 410-72267-1
Project/Site: D'Imperio Property Site Quarterly

## Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

**Lab Sample ID: MB 410-223026/1-A**
**Client Sample ID: Method Blank**
**Matrix: Water**
**Prep Type: Total/NA**
**Analysis Batch: 223230**
**Prep Batch: 223026**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | ND | | 0.30 | 0.10 | ug/L | | 02/11/22 09:44 | 02/11/22 16:41 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Benzo(a)pyrene-d12 (Surr)* | *83* | | *10 - 110* | *02/11/22 09:44* | *02/11/22 16:41* | *1* |
| *Fluoranthene-d10 (Surr)* | *93* | | *47 - 128* | *02/11/22 09:44* | *02/11/22 16:41* | *1* |
| *1-Methylnaphthalene-d10 (Surr)* | *80* | | *36 - 111* | *02/11/22 09:44* | *02/11/22 16:41* | *1* |

**Lab Sample ID: LCS 410-223026/2-A**
**Client Sample ID: Lab Control Sample**
**Matrix: Water**
**Prep Type: Total/NA**
**Analysis Batch: 223230**
**Prep Batch: 223026**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | | | 1.00 | 0.579 | | ug/L | | 58 | 23 - 120 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Benzo(a)pyrene-d12 (Surr)* | *94* | | *10 - 110* |
| *Fluoranthene-d10 (Surr)* | *95* | | *47 - 128* |
| *1-Methylnaphthalene-d10 (Surr)* | *76* | | *36 - 111* |

# QC Association Summary

Client: O & M Inc.
Job ID: 410-72267-1
Project/Site: D'Imperio Property Site Quarterly

## GC/MS Semi VOA

### Prep Batch: 223026

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 410-72267-1 | EFF/220209 | Total/NA | Groundwater | 3510C | |
| MB 410-223026/1-A | Method Blank | Total/NA | Water | 3510C | |
| LCS 410-223026/2-A | Lab Control Sample | Total/NA | Water | 3510C | |

### Analysis Batch: 223230

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 410-72267-1 | EFF/220209 | Total/NA | Groundwater | 8270E SIM | 223026 |
| MB 410-223026/1-A | Method Blank | Total/NA | Water | 8270E SIM | 223026 |
| LCS 410-223026/2-A | Lab Control Sample | Total/NA | Water | 8270E SIM | 223026 |

# Lab Chronicle

Client: O & M Inc.
Job ID: 410-72267-1
Project/Site: D'Imperio Property Site Quarterly

**Client Sample ID: EFF/220209**
**Lab Sample ID: 410-72267-1**
**Date Collected: 02/09/22 10:37**
**Matrix: Groundwater**
**Date Received: 02/09/22 18:15**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 3510C | | | 223026 | 02/11/22 09:44 | XPN5 | ELLE |
| Total/NA | Analysis | 8270E SIM | | 1 | 223230 | 02/11/22 23:40 | UWHS | ELLE |

**Laboratory References:**

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

# Accreditation/Certification Summary

Client: O & M Inc.
Job ID: 410-72267-1
Project/Site: D'Imperio Property Site Quarterly

## Laboratory: Eurofins Lancaster Laboratories Env, LLC

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| New Jersey | NELAP | PA011 | 06-30-22 |

# Method Summary

Client: O & M Inc.
Job ID: 410-72267-1
Project/Site: D'Imperio Property Site Quarterly

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8270E SIM | Semivolatile Organic Compounds (GC/MS SIM) | SW846 | ELLE |
| 3510C | Liquid-Liquid Extraction (Separatory Funnel) | SW846 | ELLE |

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

# Sample Summary

Client: O & M Inc.
Job ID: 410-72267-1
Project/Site: D'Imperio Property Site Quarterly

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 410-72267-1 | EFF/220209 | Groundwater | 02/09/22 10:37 | 02/09/22 18:15 |

v, LLC

# Chain of Custody Record

eurofins

410-72267 Chain of Custody

| | | | | |
|---|---|---|---|---|
| Sampler: STEPHEN BORTON | Lab PM: Weyandt, Barbara A | Carrier Tracking No(s): | COC No: 410-49556-6703.1 |
| Client Contact: Steve Borton | Phone: 609 909 0624 | E-Mail: Barbara.Weyandt@eurofinset.com | State of Origin: NJ | Page: Page 1 of 1 |
| Company: O & M Inc | PWSID: | | | Job #: |
| Address: 450 Montbrook Lane | Due Date Requested: STANDARD | | | |
| City: Knoxville | TAT Requested (days): 2 WEEKS | | | |
| State, Zip: TN, 37919-2705 | Compliance Project: Δ Yes ✓ No | | | |
| Phone: 609-868-0447(Tel) | PO #: ~~382A220112~~ 382A220209 | | | |
| Email: sborton@oandm-inc.com | WO #: | | | |
| Project Name: D'Imperio Property Site Quarterly | Project #: 41002088 | | | |
| Site: New Jersey | SSOW#: | | | |

Analysis Requested

| Sample Identification | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | 8270E - Phenol | 300_ORGFM_28D - Chloride, Sulfate | SM5210B_Calc - BOD, 5-Day Only | 6010D, 7470A | 8260D - Monthly VOCs | 8270E_SIM - 1,4-Dioxane | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | N | N | N | D | A | N | | |
| EFF/220209 | 2-9-22 | 1037 | G | W | | | | | | | X | 1 | |

Preservation Codes:

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

**Possible Hazard Identification**
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, (III), IV, Other (specify)

Special Instructions/QC Requirements:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Empty Kit Relinquished by | | Date: | | Time: | | Method of Shipment | |
| Relinquished by: Edwin Hernandez | Date/Time: 2/7/22 | 10:45 | Company | Received by: | Date/Time: 2-8-22 | 1200 | Company: O&M |
| Relinquished by: | Date/Time: 2-9-22 | 1211 | Company: O&M | Received by: | Date/Time: 2-9-22 | 12:1€ | Company |
| Relinquished by: | Date/Time: 2-9-22 | 1800 | Company | Received by: | Date/Time: 2/9/22 | 18:15 | Company: ELLET |
| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | | | Cooler Temperature(s) °C and Other Remarks: | | 1.2 | |

Ver: 06/08/2021

CL

AP

# Login Sample Receipt Checklist

Client: O & M Inc.

Job Number: 410-72267-1

**Login Number: 72267**

**List Source: Eurofins Lancaster Laboratories Env, LLC**

**List Number: 1**

**Creator: Leakway, Christian**

| Question | Answer | Comment |
|---|---|---|
| The cooler's custody seal is intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable (</=6C, not frozen). | True | |
| Cooler Temperature is recorded. | True | |
| WV: Container Temperature is acceptable (</=6C, not frozen). | N/A | |
| WV: Container Temperature is recorded. | N/A | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| There is sufficient vol. for all requested analyses. | True | |
| Is the Field Sampler's name present on COC? | True | |
| Sample custody seals are intact. | N/A | |

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# ANALYTICAL REPORT

Eurofins Lancaster Laboratories Env, LLC
2425 New Holland Pike
Lancaster, PA 17601
Tel: (717)656-2300

Laboratory Job ID: 410-75935-1
Client Project/Site: D'Imperio Property Site Quarterly

For:
O & M Inc.
450 Montbrook Lane
Knoxville, Tennessee 37919-2705

Attn: Mr. Tom Thomas

Barb Weyandt

*Authorized for release by:*
*3/21/2022 8:17:49 PM*

Barbara Weyandt, Project Manager
(717)556-7264
Barbara.Weyandt@eurofinset.com

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.
· QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
· Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
· Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied, except as otherwise agreed. We disclaim any other warranties, expressed or implied, including a warranty of fitness for particular purpose and warranty of merchantability. In no event shall Eurofins Lancaster Laboratories Environmental, LLC be liable for indirect, special, consequential, or incidental damages including, but not limited to, damages for loss of profit or goodwill regardless of (A) the negligence (either sole or concurrent) of Eurofins Lancaster Laboratories Environmental and (B) whether Eurofins Lancaster Laboratories Environmental has been informed of the possibility of such damages. We accept no legal responsibility for the purposes for which the client uses the test results. Except as otherwise agreed, no purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Barb Weyandt

Barbara Weyandt
Project Manager
*3/21/2022 8:17:49 PM*

# Table of Contents

# Definitions/Glossary

Client: O & M Inc. Job ID: 410-75935-1
Project/Site: D'Imperio Property Site Quarterly

## Qualifiers

### GC/MS VOA

| Qualifier | Qualifier Description |
|---|---|
| cn | Refer to Case Narrative for further detail |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| 1C | Result is from the primary column on a dual-column method. |
| 2C | Result is from the confirmation column on a dual-column method. |
| CFL | Contains Free Liquid |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |
| TNTC | Too Numerous To Count |

# Case Narrative

Client: O & M Inc.
Project/Site: D'Imperio Property Site Quarterly

Job ID: 410-75935-1

## Job ID: 410-75935-1

### Laboratory: Eurofins Lancaster Laboratories Env, LLC

**Narrative**

**Job Narrative**
**410-75935-1**

**Receipt**
The sample was received on 3/11/2022 7:00 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.1°C

**Receipt Exceptions**
TB = TALS 75934

**GC/MS VOA**
Method 8260D: The continuing calibration verification (CCV) associated with batch 410-233939 recovered outside acceptance criteria, low biased, for 1,1-Dichloroethene. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Non-detections of the affected analytes are reported. Any detections are considered estimated.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

**GC/MS Semi VOA**
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

# Detection Summary

Client: O & M Inc.
Job ID: 410-75935-1
Project/Site: D'Imperio Property Site Quarterly

## Client Sample ID: BR3E/220311
## Lab Sample ID: 410-75935-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 0.96 | J cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| 1,2-Dichloroethane | 2.5 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| 1,2-Dichloropropane | 1.4 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| Chloroform | 16 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| cis-1,2-Dichloroethene | 1.4 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| Ethylbenzene | 5.0 | cn | 1.0 | 0.40 | ug/L | 1 | | 8260D | Total/NA |
| Trichloroethene | 0.35 | J cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| 1,4-Dioxane | 5.8 | | 0.31 | 0.10 | ug/L | 1 | | 8270E SIM | Total/NA |

This Detection Summary does not include radiochemical test results.

**Client Sample ID: BR3E/220311**
**Lab Sample ID: 410-75935-1**
**Date Collected: 03/11/22 11:58**
**Matrix: Water**
**Date Received: 03/11/22 19:00**

## Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 01:19 | 1 |
| **1,1-Dichloroethane** | **0.96** | **J cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 01:19 | 1 |
| 1,1-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 01:19 | 1 |
| **1,2-Dichloroethane** | **2.5** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 01:19 | 1 |
| **1,2-Dichloropropane** | **1.4** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 01:19 | 1 |
| 2-Butanone | ND | cn | 10 | 0.50 | ug/L | | | 03/16/22 01:19 | 1 |
| Benzene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 01:19 | 1 |
| Chlorobenzene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 01:19 | 1 |
| **Chloroform** | **16** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 01:19 | 1 |
| **cis-1,2-Dichloroethene** | **1.4** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 01:19 | 1 |
| **Ethylbenzene** | **5.0** | **cn** | 1.0 | 0.40 | ug/L | | | 03/16/22 01:19 | 1 |
| Methylene Chloride | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 01:19 | 1 |
| Tetrachloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 01:19 | 1 |
| Toluene | ND | cn | 1.0 | 0.20 | ug/L | | | 03/16/22 01:19 | 1 |
| trans-1,2-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 01:19 | 1 |
| **Trichloroethene** | **0.35** | **J cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 01:19 | 1 |
| Vinyl chloride | ND | cn | 1.0 | 0.20 | ug/L | | | 03/16/22 01:19 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *105* | *cn* | *80 - 120* | | *03/16/22 01:19* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | *cn* | *80 - 120* | | *03/16/22 01:19* | *1* |
| *Dibromofluoromethane (Surr)* | *103* | *cn* | *80 - 120* | | *03/16/22 01:19* | *1* |
| *Toluene-d8 (Surr)* | *100* | *cn* | *80 - 120* | | *03/16/22 01:19* | *1* |

## Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **1,4-Dioxane** | **5.8** | | 0.31 | 0.10 | ug/L | | 03/18/22 17:30 | 03/21/22 12:31 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Benzo(a)pyrene-d12 (Surr)* | *72* | | *10 - 110* | *03/18/22 17:30* | *03/21/22 12:31* | *1* |
| *Fluoranthene-d10 (Surr)* | *85* | | *47 - 128* | *03/18/22 17:30* | *03/21/22 12:31* | *1* |
| *1-Methylnaphthalene-d10 (Surr)* | *72* | | *36 - 111* | *03/18/22 17:30* | *03/21/22 12:31* | *1* |

# Surrogate Summary

Client: O & M Inc.
Job ID: 410-75935-1
Project/Site: D'Imperio Property Site Quarterly

## Method: 8260D - Volatile Organic Compounds by GC/MS

**Matrix: Water**
**Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | |
|---|---|---|---|---|---|
| | | DCA | BFB | DBFM | TOL |
| Lab Sample ID | Client Sample ID | (80-120) | (80-120) | (80-120) | (80-120) |
| 410-75935-1 | BR3E/220311 | 105 cn | 96 cn | 103 cn | 100 cn |
| LCS 410-233939/4 | Lab Control Sample | 105 | 99 | 102 | 101 |
| LCSD 410-233939/5 | Lab Control Sample Dup | 106 | 99 | 102 | 101 |
| MB 410-233939/7 | Method Blank | 107 | 97 | 103 | 99 |

**Surrogate Legend**

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

## Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

**Matrix: Water**
**Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | |
|---|---|---|---|---|
| | | BAPd12 | FLN10 | MNPd10 |
| Lab Sample ID | Client Sample ID | (10-110) | (47-128) | (36-111) |
| 410-75935-1 | BR3E/220311 | 72 | 85 | 72 |
| LCS 410-235304/2-A | Lab Control Sample | 85 | 91 | 61 |
| MB 410-235304/1-A | Method Blank | 70 | 79 | 58 |

**Surrogate Legend**

BAPd12 = Benzo(a)pyrene-d12 (Surr)
FLN10 = Fluoranthene-d10 (Surr)
MNPd10 = 1-Methylnaphthalene-d10 (Surr)

## Method: 8260D - Volatile Organic Compounds by GC/MS

**Lab Sample ID: MB 410-233939/7**
**Matrix: Water**
**Analysis Batch: 233939**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| 2-Butanone | ND | | 10 | 0.50 | ug/L | | | 03/15/22 20:32 | 1 |
| Benzene | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| Chloroform | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.40 | ug/L | | | 03/15/22 20:32 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| Toluene | ND | | 1.0 | 0.20 | ug/L | | | 03/15/22 20:32 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| Trichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| Vinyl chloride | ND | | 1.0 | 0.20 | ug/L | | | 03/15/22 20:32 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *107* | | *80 - 120* | | *03/15/22 20:32* | *1* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *80 - 120* | | *03/15/22 20:32* | *1* |
| *Dibromofluoromethane (Surr)* | *103* | | *80 - 120* | | *03/15/22 20:32* | *1* |
| *Toluene-d8 (Surr)* | *99* | | *80 - 120* | | *03/15/22 20:32* | *1* |

**Lab Sample ID: LCS 410-233939/4**
**Matrix: Water**
**Analysis Batch: 233939**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 20.0 | 16.1 | | ug/L | | 80 | 67 - 126 |
| 1,1-Dichloroethane | 20.0 | 17.6 | | ug/L | | 88 | 80 - 120 |
| 1,1-Dichloroethene | 20.0 | 16.8 | | ug/L | | 84 | 80 - 131 |
| 1,2-Dichloroethane | 20.0 | 18.0 | | ug/L | | 90 | 73 - 124 |
| 1,2-Dichloropropane | 20.0 | 18.6 | | ug/L | | 93 | 80 - 120 |
| 2-Butanone | 250 | 290 | | ug/L | | 116 | 59 - 135 |
| Benzene | 20.0 | 17.6 | | ug/L | | 88 | 80 - 120 |
| Chlorobenzene | 20.0 | 17.2 | | ug/L | | 86 | 80 - 120 |
| Chloroform | 20.0 | 17.1 | | ug/L | | 86 | 80 - 120 |
| cis-1,2-Dichloroethene | 20.0 | 17.6 | | ug/L | | 88 | 80 - 125 |
| Ethylbenzene | 20.0 | 16.7 | | ug/L | | 84 | 80 - 120 |
| Methylene Chloride | 20.0 | 17.8 | | ug/L | | 89 | 80 - 120 |
| Tetrachloroethene | 20.0 | 17.2 | | ug/L | | 86 | 80 - 120 |
| Toluene | 20.0 | 16.7 | | ug/L | | 84 | 80 - 120 |
| trans-1,2-Dichloroethene | 20.0 | 16.5 | | ug/L | | 83 | 80 - 126 |
| Trichloroethene | 20.0 | 17.2 | | ug/L | | 86 | 80 - 120 |
| Vinyl chloride | 20.0 | 15.1 | | ug/L | | 76 | 56 - 120 |

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCS 410-233939/4**
**Matrix: Water**
**Analysis Batch: 233939**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *105* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *80 - 120* |
| *Dibromofluoromethane (Surr)* | *102* | | *80 - 120* |
| *Toluene-d8 (Surr)* | *101* | | *80 - 120* |

**Lab Sample ID: LCSD 410-233939/5**
**Matrix: Water**
**Analysis Batch: 233939**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | | | 20.0 | 16.8 | | ug/L | | 84 | 67 - 126 | 4 | 30 |
| 1,1-Dichloroethane | | | 20.0 | 18.0 | | ug/L | | 90 | 80 - 120 | 2 | 30 |
| 1,1-Dichloroethene | | | 20.0 | 17.3 | | ug/L | | 87 | 80 - 131 | 3 | 30 |
| 1,2-Dichloroethane | | | 20.0 | 18.5 | | ug/L | | 92 | 73 - 124 | 3 | 30 |
| 1,2-Dichloropropane | | | 20.0 | 18.7 | | ug/L | | 94 | 80 - 120 | 1 | 30 |
| 2-Butanone | | | 250 | 293 | | ug/L | | 117 | 59 - 135 | 1 | 30 |
| Benzene | | | 20.0 | 17.8 | | ug/L | | 89 | 80 - 120 | 1 | 30 |
| Chlorobenzene | | | 20.0 | 17.4 | | ug/L | | 87 | 80 - 120 | 1 | 30 |
| Chloroform | | | 20.0 | 17.4 | | ug/L | | 87 | 80 - 120 | 2 | 30 |
| cis-1,2-Dichloroethene | | | 20.0 | 17.7 | | ug/L | | 89 | 80 - 125 | 1 | 30 |
| Ethylbenzene | | | 20.0 | 16.9 | | ug/L | | 84 | 80 - 120 | 1 | 30 |
| Methylene Chloride | | | 20.0 | 17.7 | | ug/L | | 88 | 80 - 120 | 1 | 30 |
| Tetrachloroethene | | | 20.0 | 17.7 | | ug/L | | 88 | 80 - 120 | 3 | 30 |
| Toluene | | | 20.0 | 16.8 | | ug/L | | 84 | 80 - 120 | 0 | 30 |
| trans-1,2-Dichloroethene | | | 20.0 | 16.9 | | ug/L | | 84 | 80 - 126 | 2 | 30 |
| Trichloroethene | | | 20.0 | 17.0 | | ug/L | | 85 | 80 - 120 | 1 | 30 |
| Vinyl chloride | | | 20.0 | 15.7 | | ug/L | | 78 | 56 - 120 | 4 | 30 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *106* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *80 - 120* |
| *Dibromofluoromethane (Surr)* | *102* | | *80 - 120* |
| *Toluene-d8 (Surr)* | *101* | | *80 - 120* |

## Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

**Lab Sample ID: MB 410-235304/1-A**
**Matrix: Water**
**Analysis Batch: 235623**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 235304**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | ND | | 0.30 | 0.10 | ug/L | | 03/18/22 17:30 | 03/21/22 06:57 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| *Benzo(a)pyrene-d12 (Surr)* | *70* | | *10 - 110* | *03/18/22 17:30* | *03/21/22 06:57* | *1* |
| *Fluoranthene-d10 (Surr)* | *79* | | *47 - 128* | *03/18/22 17:30* | *03/21/22 06:57* | *1* |
| *1-Methylnaphthalene-d10 (Surr)* | *58* | | *36 - 111* | *03/18/22 17:30* | *03/21/22 06:57* | *1* |

## Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

**Lab Sample ID: LCS 410-235304/2-A**
**Matrix: Water**
**Analysis Batch: 235623**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 235304**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | | | 1.00 | 0.479 | | ug/L | | 48 | 23 - 120 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Benzo(a)pyrene-d12 (Surr)* | *85* | | *10 - 110* |
| *Fluoranthene-d10 (Surr)* | *91* | | *47 - 128* |
| *1-Methylnaphthalene-d10 (Surr)* | *61* | | *36 - 111* |

# QC Association Summary

Client: O & M Inc.
Job ID: 410-75935-1
Project/Site: D'Imperio Property Site Quarterly

## GC/MS VOA

### Analysis Batch: 233939

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 410-75935-1 | BR3E/220311 | Total/NA | Water | 8260D | |
| MB 410-233939/7 | Method Blank | Total/NA | Water | 8260D | |
| LCS 410-233939/4 | Lab Control Sample | Total/NA | Water | 8260D | |
| LCSD 410-233939/5 | Lab Control Sample Dup | Total/NA | Water | 8260D | |

## GC/MS Semi VOA

### Prep Batch: 235304

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 410-75935-1 | BR3E/220311 | Total/NA | Water | 3510C | |
| MB 410-235304/1-A | Method Blank | Total/NA | Water | 3510C | |
| LCS 410-235304/2-A | Lab Control Sample | Total/NA | Water | 3510C | |

### Analysis Batch: 235623

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 410-75935-1 | BR3E/220311 | Total/NA | Water | 8270E SIM | 235304 |
| MB 410-235304/1-A | Method Blank | Total/NA | Water | 8270E SIM | 235304 |
| LCS 410-235304/2-A | Lab Control Sample | Total/NA | Water | 8270E SIM | 235304 |

# Lab Chronicle

Client: O & M Inc.
Job ID: 410-75935-1
Project/Site: D'Imperio Property Site Quarterly

**Client Sample ID: BR3E/220311**
**Lab Sample ID: 410-75935-1**
**Date Collected: 03/11/22 11:58**
**Matrix: Water**
**Date Received: 03/11/22 19:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 233939 | 03/16/22 01:19 | K4WN | ELLE |
| Total/NA | Prep | 3510C | | | 235304 | 03/18/22 17:30 | MD4W | ELLE |
| Total/NA | Analysis | 8270E SIM | | 1 | 235623 | 03/21/22 12:31 | X3ZL | ELLE |

**Laboratory References:**

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

# Accreditation/Certification Summary

Client: O & M Inc.
Job ID: 410-75935-1
Project/Site: D'Imperio Property Site Quarterly

## Laboratory: Eurofins Lancaster Laboratories Env, LLC

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| New Jersey | NELAP | PA011 | 06-30-22 |

# Method Summary

Client: O & M Inc.
Job ID: 410-75935-1
Project/Site: D'Imperio Property Site Quarterly

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8260D | Volatile Organic Compounds by GC/MS | SW846 | ELLE |
| 8270E SIM | Semivolatile Organic Compounds (GC/MS SIM) | SW846 | ELLE |
| 3510C | Liquid-Liquid Extraction (Separatory Funnel) | SW846 | ELLE |
| 5030C | Purge and Trap | SW846 | ELLE |

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

# Sample Summary

Client: O & M Inc.
Job ID: 410-75935-1
Project/Site: D'Imperio Property Site Quarterly

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 410-75935-1 | BR3E/220311 | Water | 03/11/22 11:58 | 03/11/22 19:00 |

Eurofins Lancaster Laboratories Env, LLC
2425 New Holland Pike
Lancaster, PA 17601
Phone: 717-656-2300 Fax: 717-656-2681

# Chain of Custody Record

eurofins Environment Testing America

410-75935 Chain of Custody

| Client Information | Sampler: STEPHEN BORTON | Lab PM: Weyandt, Barbara A | COC No: 410-51781-6703.1 |
|---|---|---|---|
| Client Contact: Steve Borton | Phone: 609-909-0624 | E-Mail: Barbara.Weyandt@eurofinset.com | State of Origin: NJ |
| Company: O & M Inc. | PWSID: | Analysis Requested | Page: Page 1 of 1 |
| Address: 450 Montbrook Lane | Due Date Requested: STANDARD | | Job #: |
| City: Knoxville | TAT Requested (days): 14 DAYS | | |
| State, Zip: TN, 37919-2705 | Compliance Project: Yes No | | |
| Phone: 609-868-0447(Tel) | PO #: 382A220312 382A220311 | | |
| Email: sborton@oandm-inc.com | WO #: | | |
| Project Name: D'Imperio Property Site Quarterly | Project #: 41002088 | | |
| Site: New Jersey | SSOW#: | | |

| Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | 8270E - Phenol | 300_ORGFM_28D - Chloride, Sulfate | SM5210B_Calc - BOD, 5-Day Only | 6010D, 7470A | 8260D - Monthly VOCs + 10 VINYL CHLORIDE | 8270E_SIM - 1,4-Dioxane | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | N | N | N | D | A | N | | |
| BR3E/220311 | 3-11-22 | 1158 | G | W | N | | | | | X | X | | |

Preservation Codes:

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

**Possible Hazard Identification**
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**
☐ Return To Client ☑ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by | Date/Time | Company | Received by | Date/Time | Company |
|---|---|---|---|---|---|---|
| 1 | | | | | 3-10-22 1400 | O&M |
| 2 | | 3/11/21 1530 | OM | | 3.11.22 1537 | |
| 3 | | 3.11.22 1853 | | | 3/11/22 19:00 | ELLET |

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: not present

Cooler Temperature(s) °C and Other Remarks: 2.1°C

Ver 06/08/2021

eurofins | Environment Testing America

# ANALYTICAL REPORT

Eurofins Lancaster Laboratories Env, LLC
2425 New Holland Pike
Lancaster, PA 17601
Tel: (717)656-2300

Laboratory Job ID: 410-75934-1
Client Project/Site: D'Imperio Property Site

For:
O & M Inc.
450 Montbrook Lane
Knoxville, Tennessee 37919-2705

Attn: Mr. Tom Thomas

Barb Weyandt

*Authorized for release by:*
*3/22/2022 3:43:05 AM*

Barbara Weyandt, Project Manager
(717)556-7264
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Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.
· QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
· Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
· Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Barb Weyandt

Barbara Weyandt
Project Manager
*3/22/2022 3:43:05 AM*

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Client: O & M Inc.
Job ID: 410-75934-1
Project/Site: D'Imperio Property Site

## Qualifiers

### GC/MS VOA

| Qualifier | Qualifier Description |
|---|---|
| cn | Refer to Case Narrative for further detail |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

### HPLC/IC

| Qualifier | Qualifier Description |
|---|---|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

### Metals

| Qualifier | Qualifier Description |
|---|---|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| 1C | Result is from the primary column on a dual-column method. |
| 2C | Result is from the confirmation column on a dual-column method. |
| CFL | Contains Free Liquid |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |
| TNTC | Too Numerous To Count |

# Case Narrative

Client: O & M Inc.
Project/Site: D'Imperio Property Site

Job ID: 410-75934-1

## Job ID: 410-75934-1

### Laboratory: Eurofins Lancaster Laboratories Env, LLC

**Narrative**

**Job Narrative**
**410-75934-1**

**Receipt**
The samples were received on 3/11/2022 7:00 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.1°C

**GC/MS VOA**
Method 8260D: The continuing calibration verification (CCV) associated with batch 410-233939 recovered outside acceptance criteria, low biased, for 1,1-Dichloroethene. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Non-detections of the affected analytes are reported. Any detections are considered estimated.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

**GC/MS Semi VOA**
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

**HPLC/IC**
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

**Metals**
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

**General Chemistry**
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

# Detection Summary

Client: O & M Inc.
Job ID: 410-75934-1
Project/Site: D'Imperio Property Site

## Client Sample ID: EFF/220311 — Lab Sample ID: 410-75934-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 2.0 | J | 5.0 | 1.5 | mg/L | 5 | | EPA 300.0 R2.1 | Total/NA |
| Chloride | 27 | | 2.0 | 1.0 | mg/L | 5 | | EPA 300.0 R2.1 | Total/NA |
| Manganese | 0.013 | | 0.010 | 0.0030 | mg/L | 1 | | 6010D | Total Recoverable |
| Mercury | 0.16 | J | 0.20 | 0.079 | ug/L | 1 | | 7470A | Total/NA |

## Client Sample ID: LEADBAC/220311 — Lab Sample ID: 410-75934-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | 0.79 | J cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| Chloroform | 1.1 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |

## Client Sample ID: BR/UC/220311 — Lab Sample ID: 410-75934-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 0.62 | J cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| 1,2-Dichloroethane | 0.96 | J cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| 1,2-Dichloropropane | 1.7 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| Chloroform | 8.1 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| cis-1,2-Dichloroethene | 1.1 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| Ethylbenzene | 1.2 | cn | 1.0 | 0.40 | ug/L | 1 | | 8260D | Total/NA |

## Client Sample ID: LC2345/220311 — Lab Sample ID: 410-75934-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 0.48 | J cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| 1,2-Dichloroethane | 3.1 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| 1,2-Dichloropropane | 3.8 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| Chloroform | 3.1 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| cis-1,2-Dichloroethene | 2.5 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| Trichloroethene | 0.53 | J cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |

## Client Sample ID: LC789/220311 — Lab Sample ID: 410-75934-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | 2.4 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| Trichloroethene | 1.5 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |

## Client Sample ID: TB/220311 — Lab Sample ID: 410-75934-6

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

## Client Sample ID: EFF/220311
**Lab Sample ID: 410-75934-1**

**Date Collected: 03/11/22 10:33**
**Matrix: Water**

**Date Received: 03/11/22 19:00**

### Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 23:29 | 1 |
| 1,1-Dichloroethane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 23:29 | 1 |
| 1,1-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 23:29 | 1 |
| 1,2-Dichloroethane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 23:29 | 1 |
| 1,2-Dichloropropane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 23:29 | 1 |
| 2-Butanone | ND | cn | 10 | 0.50 | ug/L | | | 03/15/22 23:29 | 1 |
| Benzene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 23:29 | 1 |
| Chlorobenzene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 23:29 | 1 |
| Chloroform | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 23:29 | 1 |
| cis-1,2-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 23:29 | 1 |
| Ethylbenzene | ND | cn | 1.0 | 0.40 | ug/L | | | 03/15/22 23:29 | 1 |
| Methylene Chloride | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 23:29 | 1 |
| Toluene | ND | cn | 1.0 | 0.20 | ug/L | | | 03/15/22 23:29 | 1 |
| trans-1,2-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 23:29 | 1 |
| Trichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 23:29 | 1 |
| Tetrachloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 23:29 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *105* | *cn* | *80 - 120* | | *03/15/22 23:29* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | *cn* | *80 - 120* | | *03/15/22 23:29* | *1* |
| *Dibromofluoromethane (Surr)* | *103* | *cn* | *80 - 120* | | *03/15/22 23:29* | *1* |
| *Toluene-d8 (Surr)* | *100* | *cn* | *80 - 120* | | *03/15/22 23:29* | *1* |

### Method: 8270E - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Phenol | ND | | 2.0 | 0.51 | ug/L | | 03/18/22 09:26 | 03/20/22 19:58 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2,4,6-Tribromophenol (Surr)* | *90* | | *10 - 150* | *03/18/22 09:26* | *03/20/22 19:58* | *1* |
| *2-Fluorobiphenyl (Surr)* | *84* | | *44 - 120* | *03/18/22 09:26* | *03/20/22 19:58* | *1* |
| *2-Fluorophenol (Surr)* | *45* | | *10 - 120* | *03/18/22 09:26* | *03/20/22 19:58* | *1* |
| *Nitrobenzene-d5 (Surr)* | *81* | | *25 - 125* | *03/18/22 09:26* | *03/20/22 19:58* | *1* |
| *p-Terphenyl-d14 (Surr)* | *114* | | *37 - 120* | *03/18/22 09:26* | *03/20/22 19:58* | *1* |
| *Phenol-d5 (Surr)* | *31* | | *10 - 120* | *03/18/22 09:26* | *03/20/22 19:58* | *1* |

### Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Sulfate** | **2.0** | **J** | 5.0 | 1.5 | mg/L | | | 03/18/22 10:04 | 5 |
| **Chloride** | **27** | | 2.0 | 1.0 | mg/L | | | 03/18/22 10:04 | 5 |

### Method: 6010D - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | | 0.050 | 0.016 | mg/L | | 03/16/22 21:59 | 03/18/22 09:34 | 1 |
| Chromium | ND | | 0.015 | 0.0016 | mg/L | | 03/16/22 21:59 | 03/18/22 09:34 | 1 |
| Lead | ND | | 0.015 | 0.0071 | mg/L | | 03/16/22 21:59 | 03/18/22 09:34 | 1 |
| Copper | ND | | 0.020 | 0.012 | mg/L | | 03/16/22 21:59 | 03/18/22 09:34 | 1 |
| Iron | ND | | 0.20 | 0.040 | mg/L | | 03/16/22 21:59 | 03/18/22 09:34 | 1 |
| **Manganese** | **0.013** | | 0.010 | 0.0030 | mg/L | | 03/16/22 21:59 | 03/18/22 09:34 | 1 |
| Zinc | ND | | 0.020 | 0.0037 | mg/L | | 03/16/22 21:59 | 03/18/22 09:34 | 1 |

## Client Sample ID: EFF/220311
**Lab Sample ID: 410-75934-1**

**Date Collected: 03/11/22 10:33**
**Matrix: Water**
**Date Received: 03/11/22 19:00**

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.16** | **J** | 0.20 | 0.079 | ug/L | | 03/17/22 05:06 | 03/17/22 18:43 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Biochemical Oxygen Demand | ND | | 2.0 | 2.0 | mg/L | | | 03/12/22 11:55 | 1 |

## Client Sample ID: LEADBAC/220311
**Lab Sample ID: 410-75934-2**

**Date Collected: 03/11/22 10:39**
**Matrix: Water**
**Date Received: 03/11/22 19:00**

### Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 23:51 | 1 |
| 1,1-Dichloroethane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 23:51 | 1 |
| 1,1-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 23:51 | 1 |
| **1,2-Dichloroethane** | **0.79** | **J cn** | 1.0 | 0.30 | ug/L | | | 03/15/22 23:51 | 1 |
| 1,2-Dichloropropane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 23:51 | 1 |
| 2-Butanone | ND | cn | 10 | 0.50 | ug/L | | | 03/15/22 23:51 | 1 |
| Benzene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 23:51 | 1 |
| Chlorobenzene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 23:51 | 1 |
| **Chloroform** | **1.1** | **cn** | 1.0 | 0.30 | ug/L | | | 03/15/22 23:51 | 1 |
| cis-1,2-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 23:51 | 1 |
| Ethylbenzene | ND | cn | 1.0 | 0.40 | ug/L | | | 03/15/22 23:51 | 1 |
| Methylene Chloride | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 23:51 | 1 |
| Toluene | ND | cn | 1.0 | 0.20 | ug/L | | | 03/15/22 23:51 | 1 |
| trans-1,2-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 23:51 | 1 |
| Trichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 23:51 | 1 |
| Tetrachloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 23:51 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *105* | *cn* | *80 - 120* | | *03/15/22 23:51* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | *cn* | *80 - 120* | | *03/15/22 23:51* | *1* |
| *Dibromofluoromethane (Surr)* | *101* | *cn* | *80 - 120* | | *03/15/22 23:51* | *1* |
| *Toluene-d8 (Surr)* | *101* | *cn* | *80 - 120* | | *03/15/22 23:51* | *1* |

## Client Sample ID: BR/UC/220311
**Lab Sample ID: 410-75934-3**

**Date Collected: 03/11/22 10:46**
**Matrix: Water**
**Date Received: 03/11/22 19:00**

### Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 00:13 | 1 |
| **1,1-Dichloroethane** | **0.62** | **J cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 00:13 | 1 |
| 1,1-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 00:13 | 1 |
| **1,2-Dichloroethane** | **0.96** | **J cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 00:13 | 1 |
| **1,2-Dichloropropane** | **1.7** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 00:13 | 1 |
| 2-Butanone | ND | cn | 10 | 0.50 | ug/L | | | 03/16/22 00:13 | 1 |
| Benzene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 00:13 | 1 |
| Chlorobenzene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 00:13 | 1 |
| **Chloroform** | **8.1** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 00:13 | 1 |
| **cis-1,2-Dichloroethene** | **1.1** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 00:13 | 1 |

## Client Sample ID: BR/UC/220311
**Lab Sample ID: 410-75934-3**

**Date Collected: 03/11/22 10:46**
**Matrix: Water**
**Date Received: 03/11/22 19:00**

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Ethylbenzene** | **1.2** | **cn** | 1.0 | 0.40 | ug/L | | | 03/16/22 00:13 | 1 |
| Methylene Chloride | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 00:13 | 1 |
| Tetrachloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 00:13 | 1 |
| Toluene | ND | cn | 1.0 | 0.20 | ug/L | | | 03/16/22 00:13 | 1 |
| trans-1,2-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 00:13 | 1 |
| Trichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 00:13 | 1 |
| Vinyl chloride | ND | cn | 1.0 | 0.20 | ug/L | | | 03/16/22 00:13 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *106* | *cn* | *80 - 120* | | *03/16/22 00:13* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | *cn* | *80 - 120* | | *03/16/22 00:13* | *1* |
| *Dibromofluoromethane (Surr)* | *102* | *cn* | *80 - 120* | | *03/16/22 00:13* | *1* |
| *Toluene-d8 (Surr)* | *100* | *cn* | *80 - 120* | | *03/16/22 00:13* | *1* |

## Client Sample ID: LC2345/220311
**Lab Sample ID: 410-75934-4**

**Date Collected: 03/11/22 07:57**
**Matrix: Water**
**Date Received: 03/11/22 19:00**

### Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 00:35 | 1 |
| **1,1-Dichloroethane** | **0.48** | **J cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 00:35 | 1 |
| 1,1-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 00:35 | 1 |
| **1,2-Dichloroethane** | **3.1** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 00:35 | 1 |
| **1,2-Dichloropropane** | **3.8** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 00:35 | 1 |
| 2-Butanone | ND | cn | 10 | 0.50 | ug/L | | | 03/16/22 00:35 | 1 |
| Benzene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 00:35 | 1 |
| Chlorobenzene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 00:35 | 1 |
| **Chloroform** | **3.1** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 00:35 | 1 |
| **cis-1,2-Dichloroethene** | **2.5** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 00:35 | 1 |
| Ethylbenzene | ND | cn | 1.0 | 0.40 | ug/L | | | 03/16/22 00:35 | 1 |
| Methylene Chloride | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 00:35 | 1 |
| Tetrachloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 00:35 | 1 |
| Toluene | ND | cn | 1.0 | 0.20 | ug/L | | | 03/16/22 00:35 | 1 |
| trans-1,2-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 00:35 | 1 |
| **Trichloroethene** | **0.53** | **J cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 00:35 | 1 |
| Vinyl chloride | ND | cn | 1.0 | 0.20 | ug/L | | | 03/16/22 00:35 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *107* | *cn* | *80 - 120* | | *03/16/22 00:35* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | *cn* | *80 - 120* | | *03/16/22 00:35* | *1* |
| *Dibromofluoromethane (Surr)* | *102* | *cn* | *80 - 120* | | *03/16/22 00:35* | *1* |
| *Toluene-d8 (Surr)* | *101* | *cn* | *80 - 120* | | *03/16/22 00:35* | *1* |

## Client Sample ID: LC789/220311
**Lab Sample ID: 410-75934-5**

**Date Collected: 03/11/22 08:11**
**Matrix: Water**
**Date Received: 03/11/22 19:00**

### Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 00:57 | 1 |

## Client Sample ID: LC789/220311
**Lab Sample ID: 410-75934-5**

**Date Collected: 03/11/22 08:11**
**Matrix: Water**
**Date Received: 03/11/22 19:00**

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 00:57 | 1 |
| 1,1-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 00:57 | 1 |
| 1,2-Dichloroethane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 00:57 | 1 |
| 1,2-Dichloropropane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 00:57 | 1 |
| 2-Butanone | ND | cn | 10 | 0.50 | ug/L | | | 03/16/22 00:57 | 1 |
| Benzene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 00:57 | 1 |
| Chlorobenzene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 00:57 | 1 |
| **Chloroform** | **2.4** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 00:57 | 1 |
| cis-1,2-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 00:57 | 1 |
| Ethylbenzene | ND | cn | 1.0 | 0.40 | ug/L | | | 03/16/22 00:57 | 1 |
| Methylene Chloride | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 00:57 | 1 |
| Tetrachloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 00:57 | 1 |
| Toluene | ND | cn | 1.0 | 0.20 | ug/L | | | 03/16/22 00:57 | 1 |
| trans-1,2-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 00:57 | 1 |
| **Trichloroethene** | **1.5** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 00:57 | 1 |
| Vinyl chloride | ND | cn | 1.0 | 0.20 | ug/L | | | 03/16/22 00:57 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *106* | *cn* | *80 - 120* | | *03/16/22 00:57* | *1* |
| *4-Bromofluorobenzene (Surr)* | *95* | *cn* | *80 - 120* | | *03/16/22 00:57* | *1* |
| *Dibromofluoromethane (Surr)* | *102* | *cn* | *80 - 120* | | *03/16/22 00:57* | *1* |
| *Toluene-d8 (Surr)* | *101* | *cn* | *80 - 120* | | *03/16/22 00:57* | *1* |

## Client Sample ID: TB/220311
**Lab Sample ID: 410-75934-6**

**Date Collected: 03/11/22 00:00**
**Matrix: Water**
**Date Received: 03/11/22 19:00**

### Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 21:16 | 1 |
| 1,1-Dichloroethane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 21:16 | 1 |
| 1,1-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 21:16 | 1 |
| 1,2-Dichloroethane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 21:16 | 1 |
| 1,2-Dichloropropane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 21:16 | 1 |
| 2-Butanone | ND | cn | 10 | 0.50 | ug/L | | | 03/15/22 21:16 | 1 |
| Benzene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 21:16 | 1 |
| Chlorobenzene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 21:16 | 1 |
| Chloroform | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 21:16 | 1 |
| cis-1,2-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 21:16 | 1 |
| Ethylbenzene | ND | cn | 1.0 | 0.40 | ug/L | | | 03/15/22 21:16 | 1 |
| Methylene Chloride | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 21:16 | 1 |
| Tetrachloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 21:16 | 1 |
| Toluene | ND | cn | 1.0 | 0.20 | ug/L | | | 03/15/22 21:16 | 1 |
| trans-1,2-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 21:16 | 1 |
| Trichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 21:16 | 1 |
| Vinyl chloride | ND | cn | 1.0 | 0.20 | ug/L | | | 03/15/22 21:16 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *106* | *cn* | *80 - 120* | | *03/15/22 21:16* | *1* |
| *4-Bromofluorobenzene (Surr)* | *97* | *cn* | *80 - 120* | | *03/15/22 21:16* | *1* |

Client: O & M Inc.
Job ID: 410-75934-1
Project/Site: D'Imperio Property Site

**Client Sample ID: TB/220311**
**Lab Sample ID: 410-75934-6**
**Date Collected: 03/11/22 00:00**
**Matrix: Water**
**Date Received: 03/11/22 19:00**

**Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)**

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Dibromofluoromethane (Surr) | 100 | cn | 80 - 120 | | 03/15/22 21:16 | 1 |
| Toluene-d8 (Surr) | 101 | cn | 80 - 120 | | 03/15/22 21:16 | 1 |

# Surrogate Summary

Client: O & M Inc.
Job ID: 410-75934-1
Project/Site: D'Imperio Property Site

## Method: 8260D - Volatile Organic Compounds by GC/MS

**Matrix: Water**
**Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | |
|---|---|---|---|---|---|
| | | DCA | BFB | DBFM | TOL |
| Lab Sample ID | Client Sample ID | (80-120) | (80-120) | (80-120) | (80-120) |
| 410-75934-1 | EFF/220311 | 105 cn | 96 cn | 103 cn | 100 cn |
| 410-75934-2 | LEADBAC/220311 | 105 cn | 96 cn | 101 cn | 101 cn |
| 410-75934-3 | BR/UC/220311 | 106 cn | 96 cn | 102 cn | 100 cn |
| 410-75934-4 | LC2345/220311 | 107 cn | 96 cn | 102 cn | 101 cn |
| 410-75934-5 | LC789/220311 | 106 cn | 95 cn | 102 cn | 101 cn |
| 410-75934-6 | TB/220311 | 106 cn | 97 cn | 100 cn | 101 cn |
| LCS 410-233939/4 | Lab Control Sample | 105 | 99 | 102 | 101 |
| LCSD 410-233939/5 | Lab Control Sample Dup | 106 | 99 | 102 | 101 |
| MB 410-233939/7 | Method Blank | 107 | 97 | 103 | 99 |

**Surrogate Legend**

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

## Method: 8270E - Semivolatile Organic Compounds (GC/MS)

**Matrix: Water**
**Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | | | |
|---|---|---|---|---|---|---|---|
| | | TBP | FBP | 2FP | NBZ | TPHd14 | PHL |
| Lab Sample ID | Client Sample ID | (10-150) | (44-120) | (10-120) | (25-125) | (37-120) | (10-120) |
| 410-75934-1 | EFF/220311 | 90 | 84 | 45 | 81 | 114 | 31 |
| LCS 410-235057/2-A | Lab Control Sample | 96 | 83 | 61 | 81 | 104 | 45 |
| LCSD 410-235057/3-A | Lab Control Sample Dup | 98 | 81 | 63 | 81 | 98 | 47 |
| MB 410-235057/1-A | Method Blank | 92 | 85 | 50 | 84 | 104 | 34 |

**Surrogate Legend**

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
TPHd14 = p-Terphenyl-d14 (Surr)
PHL = Phenol-d5 (Surr)

## Method: 8260D - Volatile Organic Compounds by GC/MS

**Lab Sample ID: MB 410-233939/7**
**Matrix: Water**
**Analysis Batch: 233939**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| 2-Butanone | ND | | 10 | 0.50 | ug/L | | | 03/15/22 20:32 | 1 |
| Benzene | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| Chloroform | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.40 | ug/L | | | 03/15/22 20:32 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| Toluene | ND | | 1.0 | 0.20 | ug/L | | | 03/15/22 20:32 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| Trichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| Vinyl chloride | ND | | 1.0 | 0.20 | ug/L | | | 03/15/22 20:32 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *107* | | *80 - 120* | | *03/15/22 20:32* | *1* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *80 - 120* | | *03/15/22 20:32* | *1* |
| *Dibromofluoromethane (Surr)* | *103* | | *80 - 120* | | *03/15/22 20:32* | *1* |
| *Toluene-d8 (Surr)* | *99* | | *80 - 120* | | *03/15/22 20:32* | *1* |

**Lab Sample ID: LCS 410-233939/4**
**Matrix: Water**
**Analysis Batch: 233939**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 20.0 | 16.1 | | ug/L | | 80 | 67 - 126 |
| 1,1-Dichloroethane | 20.0 | 17.6 | | ug/L | | 88 | 80 - 120 |
| 1,1-Dichloroethene | 20.0 | 16.8 | | ug/L | | 84 | 80 - 131 |
| 1,2-Dichloroethane | 20.0 | 18.0 | | ug/L | | 90 | 73 - 124 |
| 1,2-Dichloropropane | 20.0 | 18.6 | | ug/L | | 93 | 80 - 120 |
| 2-Butanone | 250 | 290 | | ug/L | | 116 | 59 - 135 |
| Benzene | 20.0 | 17.6 | | ug/L | | 88 | 80 - 120 |
| Chlorobenzene | 20.0 | 17.2 | | ug/L | | 86 | 80 - 120 |
| Chloroform | 20.0 | 17.1 | | ug/L | | 86 | 80 - 120 |
| cis-1,2-Dichloroethene | 20.0 | 17.6 | | ug/L | | 88 | 80 - 125 |
| Ethylbenzene | 20.0 | 16.7 | | ug/L | | 84 | 80 - 120 |
| Methylene Chloride | 20.0 | 17.8 | | ug/L | | 89 | 80 - 120 |
| Toluene | 20.0 | 16.7 | | ug/L | | 84 | 80 - 120 |
| trans-1,2-Dichloroethene | 20.0 | 16.5 | | ug/L | | 83 | 80 - 126 |
| Tetrachloroethene | 20.0 | 17.2 | | ug/L | | 86 | 80 - 120 |
| Trichloroethene | 20.0 | 17.2 | | ug/L | | 86 | 80 - 120 |
| Vinyl chloride | 20.0 | 15.1 | | ug/L | | 76 | 56 - 120 |

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCS 410-233939/4**
**Matrix: Water**
**Analysis Batch: 233939**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *105* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *80 - 120* |
| *Dibromofluoromethane (Surr)* | *102* | | *80 - 120* |
| *Toluene-d8 (Surr)* | *101* | | *80 - 120* |

**Lab Sample ID: LCSD 410-233939/5**
**Matrix: Water**
**Analysis Batch: 233939**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | | | 20.0 | 16.8 | | ug/L | | 84 | 67 - 126 | 4 | 30 |
| 1,1-Dichloroethane | | | 20.0 | 18.0 | | ug/L | | 90 | 80 - 120 | 2 | 30 |
| 1,1-Dichloroethene | | | 20.0 | 17.3 | | ug/L | | 87 | 80 - 131 | 3 | 30 |
| 1,2-Dichloroethane | | | 20.0 | 18.5 | | ug/L | | 92 | 73 - 124 | 3 | 30 |
| 1,2-Dichloropropane | | | 20.0 | 18.7 | | ug/L | | 94 | 80 - 120 | 1 | 30 |
| 2-Butanone | | | 250 | 293 | | ug/L | | 117 | 59 - 135 | 1 | 30 |
| Benzene | | | 20.0 | 17.8 | | ug/L | | 89 | 80 - 120 | 1 | 30 |
| Chlorobenzene | | | 20.0 | 17.4 | | ug/L | | 87 | 80 - 120 | 1 | 30 |
| Chloroform | | | 20.0 | 17.4 | | ug/L | | 87 | 80 - 120 | 2 | 30 |
| cis-1,2-Dichloroethene | | | 20.0 | 17.7 | | ug/L | | 89 | 80 - 125 | 1 | 30 |
| Ethylbenzene | | | 20.0 | 16.9 | | ug/L | | 84 | 80 - 120 | 1 | 30 |
| Methylene Chloride | | | 20.0 | 17.7 | | ug/L | | 88 | 80 - 120 | 1 | 30 |
| Toluene | | | 20.0 | 16.8 | | ug/L | | 84 | 80 - 120 | 0 | 30 |
| trans-1,2-Dichloroethene | | | 20.0 | 16.9 | | ug/L | | 84 | 80 - 126 | 2 | 30 |
| Tetrachloroethene | | | 20.0 | 17.7 | | ug/L | | 88 | 80 - 120 | 3 | 30 |
| Trichloroethene | | | 20.0 | 17.0 | | ug/L | | 85 | 80 - 120 | 1 | 30 |
| Vinyl chloride | | | 20.0 | 15.7 | | ug/L | | 78 | 56 - 120 | 4 | 30 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *106* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *80 - 120* |
| *Dibromofluoromethane (Surr)* | *102* | | *80 - 120* |
| *Toluene-d8 (Surr)* | *101* | | *80 - 120* |

## Method: 8270E - Semivolatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 410-235057/1-A**
**Matrix: Water**
**Analysis Batch: 235717**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 235057**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Phenol | ND | | 2.0 | 0.50 | ug/L | | 03/18/22 09:26 | 03/21/22 14:13 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| *2,4,6-Tribromophenol (Surr)* | *92* | | *10 - 150* | *03/18/22 09:26* | *03/21/22 14:13* | *1* |
| *2-Fluorobiphenyl (Surr)* | *85* | | *44 - 120* | *03/18/22 09:26* | *03/21/22 14:13* | *1* |
| *2-Fluorophenol (Surr)* | *50* | | *10 - 120* | *03/18/22 09:26* | *03/21/22 14:13* | *1* |
| *Nitrobenzene-d5 (Surr)* | *84* | | *25 - 125* | *03/18/22 09:26* | *03/21/22 14:13* | *1* |

## Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 410-235057/1-A**
**Matrix: Water**
**Analysis Batch: 235717**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 235057**

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| p-Terphenyl-d14 (Surr) | 104 | | 37 - 120 | 03/18/22 09:26 | 03/21/22 14:13 | 1 |
| Phenol-d5 (Surr) | 34 | | 10 - 120 | 03/18/22 09:26 | 03/21/22 14:13 | 1 |

**Lab Sample ID: LCS 410-235057/2-A**
**Matrix: Water**
**Analysis Batch: 235564**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 235057**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Phenol | | | 50.0 | 23.8 | | ug/L | | 48 | 22 - 120 | | |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| 2,4,6-Tribromophenol (Surr) | 96 | | 10 - 150 |
| 2-Fluorobiphenyl (Surr) | 83 | | 44 - 120 |
| 2-Fluorophenol (Surr) | 61 | | 10 - 120 |
| Nitrobenzene-d5 (Surr) | 81 | | 25 - 125 |
| p-Terphenyl-d14 (Surr) | 104 | | 37 - 120 |
| Phenol-d5 (Surr) | 45 | | 10 - 120 |

**Lab Sample ID: LCSD 410-235057/3-A**
**Matrix: Water**
**Analysis Batch: 235564**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 235057**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Phenol | | | 50.0 | 25.5 | | ug/L | | 51 | 22 - 120 | 7 | 30 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|---|---|---|---|
| 2,4,6-Tribromophenol (Surr) | 98 | | 10 - 150 |
| 2-Fluorobiphenyl (Surr) | 81 | | 44 - 120 |
| 2-Fluorophenol (Surr) | 63 | | 10 - 120 |
| Nitrobenzene-d5 (Surr) | 81 | | 25 - 125 |
| p-Terphenyl-d14 (Surr) | 98 | | 37 - 120 |
| Phenol-d5 (Surr) | 47 | | 10 - 120 |

## Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

**Lab Sample ID: MB 410-235018/5**
**Matrix: Water**
**Analysis Batch: 235018**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | ND | | 1.0 | 0.30 | mg/L | | | 03/18/22 07:22 | 1 |
| Chloride | ND | | 0.40 | 0.20 | mg/L | | | 03/18/22 07:22 | 1 |

## Method: EPA 300.0 R2.1 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCS 410-235018/3**
**Matrix: Water**
**Analysis Batch: 235018**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 7.50 | 7.50 | | mg/L | | 100 | 90 - 110 |
| Chloride | 3.00 | 2.94 | | mg/L | | 98 | 90 - 110 |

**Lab Sample ID: LCSD 410-235018/4**
**Matrix: Water**
**Analysis Batch: 235018**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 7.50 | 7.48 | | mg/L | | 100 | 90 - 110 | 0 | 20 |
| Chloride | 3.00 | 2.93 | | mg/L | | 98 | 90 - 110 | 1 | 20 |

## Method: 6010D - Metals (ICP)

**Lab Sample ID: MB 410-234482/1-A**
**Matrix: Water**
**Analysis Batch: 235151**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 234482**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | | 0.050 | 0.016 | mg/L | | 03/16/22 21:59 | 03/18/22 09:05 | 1 |
| Chromium | ND | | 0.015 | 0.0016 | mg/L | | 03/16/22 21:59 | 03/18/22 09:05 | 1 |
| Lead | ND | | 0.015 | 0.0071 | mg/L | | 03/16/22 21:59 | 03/18/22 09:05 | 1 |
| Copper | ND | | 0.020 | 0.012 | mg/L | | 03/16/22 21:59 | 03/18/22 09:05 | 1 |
| Iron | ND | | 0.20 | 0.040 | mg/L | | 03/16/22 21:59 | 03/18/22 09:05 | 1 |
| Manganese | ND | | 0.010 | 0.0030 | mg/L | | 03/16/22 21:59 | 03/18/22 09:05 | 1 |
| Zinc | ND | | 0.020 | 0.0037 | mg/L | | 03/16/22 21:59 | 03/18/22 09:05 | 1 |

**Lab Sample ID: LCS 410-234482/2-A**
**Matrix: Water**
**Analysis Batch: 235151**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 234482**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Arsenic | 0.500 | 0.496 | | mg/L | | 99 | 80 - 120 |
| Chromium | 0.500 | 0.503 | | mg/L | | 101 | 80 - 120 |
| Lead | 0.0500 | 0.0535 | | mg/L | | 107 | 80 - 120 |
| Copper | 0.500 | 0.523 | | mg/L | | 105 | 80 - 120 |
| Iron | 5.00 | 4.98 | | mg/L | | 100 | 80 - 120 |
| Manganese | 0.500 | 0.505 | | mg/L | | 101 | 80 - 120 |
| Zinc | 0.500 | 0.498 | | mg/L | | 100 | 80 - 120 |

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 410-234516/1-A**
**Matrix: Water**
**Analysis Batch: 234923**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 234516**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.20 | 0.079 | ug/L | | 03/17/22 05:06 | 03/17/22 18:03 | 1 |

## Method: 7470A - Mercury (CVAA) (Continued)

**Lab Sample ID: LCS 410-234516/2-A**
**Matrix: Water**
**Analysis Batch: 234923**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 234516**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 1.00 | 0.999 | | ug/L | | 100 | 80 - 118 |

## Method: 5210 B-2011 - BOD, 5-Day

**Lab Sample ID: SCB 410-234750/4**
**Matrix: Water**
**Analysis Batch: 234750**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | SCB Result | SCB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Biochemical Oxygen Demand | 0.815 | | 0.0000010 | 0.0000010 | mg/L | | | 03/12/22 10:18 | 1 |

**Lab Sample ID: USB 410-234750/2**
**Matrix: Water**
**Analysis Batch: 234750**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | USB Result | USB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Biochemical Oxygen Demand | 0.0967 | | 0.0000010 | 0.0000010 | mg/L | | | 03/12/22 10:18 | 1 |

**Lab Sample ID: LCS 410-234750/5**
**Matrix: Water**
**Analysis Batch: 234750**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Biochemical Oxygen Demand | 199 | 184 | | mg/L | | 93 | 85 - 115 |

# QC Association Summary

Client: O & M Inc.
Job ID: 410-75934-1
Project/Site: D'Imperio Property Site

## GC/MS VOA

### Analysis Batch: 233939

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 410-75934-1 | EFF/220311 | Total/NA | Water | 8260D | |
| 410-75934-2 | LEADBAC/220311 | Total/NA | Water | 8260D | |
| 410-75934-3 | BR/UC/220311 | Total/NA | Water | 8260D | |
| 410-75934-4 | LC2345/220311 | Total/NA | Water | 8260D | |
| 410-75934-5 | LC789/220311 | Total/NA | Water | 8260D | |
| 410-75934-6 | TB/220311 | Total/NA | Water | 8260D | |
| MB 410-233939/7 | Method Blank | Total/NA | Water | 8260D | |
| LCS 410-233939/4 | Lab Control Sample | Total/NA | Water | 8260D | |
| LCSD 410-233939/5 | Lab Control Sample Dup | Total/NA | Water | 8260D | |

## GC/MS Semi VOA

### Prep Batch: 235057

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 410-75934-1 | EFF/220311 | Total/NA | Water | 3510C | |
| MB 410-235057/1-A | Method Blank | Total/NA | Water | 3510C | |
| LCS 410-235057/2-A | Lab Control Sample | Total/NA | Water | 3510C | |
| LCSD 410-235057/3-A | Lab Control Sample Dup | Total/NA | Water | 3510C | |

### Analysis Batch: 235564

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 410-75934-1 | EFF/220311 | Total/NA | Water | 8270E | 235057 |
| LCS 410-235057/2-A | Lab Control Sample | Total/NA | Water | 8270E | 235057 |
| LCSD 410-235057/3-A | Lab Control Sample Dup | Total/NA | Water | 8270E | 235057 |

### Analysis Batch: 235717

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| MB 410-235057/1-A | Method Blank | Total/NA | Water | 8270E | 235057 |

## HPLC/IC

### Analysis Batch: 235018

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 410-75934-1 | EFF/220311 | Total/NA | Water | EPA 300.0 R2.1 | |
| MB 410-235018/5 | Method Blank | Total/NA | Water | EPA 300.0 R2.1 | |
| LCS 410-235018/3 | Lab Control Sample | Total/NA | Water | EPA 300.0 R2.1 | |
| LCSD 410-235018/4 | Lab Control Sample Dup | Total/NA | Water | EPA 300.0 R2.1 | |

## Metals

### Prep Batch: 234482

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 410-75934-1 | EFF/220311 | Total Recoverable | Water | 3005A | |
| MB 410-234482/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 410-234482/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |

### Prep Batch: 234516

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 410-75934-1 | EFF/220311 | Total/NA | Water | 7470A | |
| MB 410-234516/1-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 410-234516/2-A | Lab Control Sample | Total/NA | Water | 7470A | |

# QC Association Summary

Client: O & M Inc.
Job ID: 410-75934-1
Project/Site: D'Imperio Property Site

## Metals

### Analysis Batch: 234923

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 410-75934-1 | EFF/220311 | Total/NA | Water | 7470A | 234516 |
| MB 410-234516/1-A | Method Blank | Total/NA | Water | 7470A | 234516 |
| LCS 410-234516/2-A | Lab Control Sample | Total/NA | Water | 7470A | 234516 |

### Analysis Batch: 235151

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 410-75934-1 | EFF/220311 | Total Recoverable | Water | 6010D | 234482 |
| MB 410-234482/1-A | Method Blank | Total Recoverable | Water | 6010D | 234482 |
| LCS 410-234482/2-A | Lab Control Sample | Total Recoverable | Water | 6010D | 234482 |

## General Chemistry

### Analysis Batch: 234750

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 410-75934-1 | EFF/220311 | Total/NA | Water | 5210 B-2011 | |
| SCB 410-234750/4 | Method Blank | Total/NA | Water | 5210 B-2011 | |
| USB 410-234750/2 | Method Blank | Total/NA | Water | 5210 B-2011 | |
| LCS 410-234750/5 | Lab Control Sample | Total/NA | Water | 5210 B-2011 | |

# Lab Chronicle

Client: O & M Inc.
Job ID: 410-75934-1
Project/Site: D'Imperio Property Site

## Client Sample ID: EFF/220311
**Lab Sample ID: 410-75934-1**
**Date Collected: 03/11/22 10:33**
**Matrix: Water**
**Date Received: 03/11/22 19:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 233939 | 03/15/22 23:29 | K4WN | ELLE |
| Total/NA | Prep | 3510C | | | 235057 | 03/18/22 09:26 | YDF5 | ELLE |
| Total/NA | Analysis | 8270E | | 1 | 235564 | 03/20/22 19:58 | DZ6A | ELLE |
| Total/NA | Analysis | EPA 300.0 R2.1 | | 5 | 235018 | 03/18/22 10:04 | W5UX | ELLE |
| Total Recoverable | Prep | 3005A | | | 234482 | 03/16/22 21:59 | UAMX | ELLE |
| Total Recoverable | Analysis | 6010D | | 1 | 235151 | 03/18/22 09:34 | WJM9 | ELLE |
| Total/NA | Prep | 7470A | | | 234516 | 03/17/22 05:06 | N2PU | ELLE |
| Total/NA | Analysis | 7470A | | 1 | 234923 | 03/17/22 18:43 | UEFS | ELLE |
| Total/NA | Analysis | 5210 B-2011 | | 1 | 234750 | 03/12/22 11:55 | F8TI | ELLE |

## Client Sample ID: LEADBAC/220311
**Lab Sample ID: 410-75934-2**
**Date Collected: 03/11/22 10:39**
**Matrix: Water**
**Date Received: 03/11/22 19:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 233939 | 03/15/22 23:51 | K4WN | ELLE |

## Client Sample ID: BR/UC/220311
**Lab Sample ID: 410-75934-3**
**Date Collected: 03/11/22 10:46**
**Matrix: Water**
**Date Received: 03/11/22 19:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 233939 | 03/16/22 00:13 | K4WN | ELLE |

## Client Sample ID: LC2345/220311
**Lab Sample ID: 410-75934-4**
**Date Collected: 03/11/22 07:57**
**Matrix: Water**
**Date Received: 03/11/22 19:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 233939 | 03/16/22 00:35 | K4WN | ELLE |

## Client Sample ID: LC789/220311
**Lab Sample ID: 410-75934-5**
**Date Collected: 03/11/22 08:11**
**Matrix: Water**
**Date Received: 03/11/22 19:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 233939 | 03/16/22 00:57 | K4WN | ELLE |

## Client Sample ID: TB/220311
**Lab Sample ID: 410-75934-6**
**Date Collected: 03/11/22 00:00**
**Matrix: Water**
**Date Received: 03/11/22 19:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 233939 | 03/15/22 21:16 | K4WN | ELLE |

# Lab Chronicle

Client: O & M Inc.
Job ID: 410-75934-1
Project/Site: D'Imperio Property Site

**Laboratory References:**

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

# Accreditation/Certification Summary

Client: O & M Inc.
Job ID: 410-75934-1
Project/Site: D'Imperio Property Site

## Laboratory: Eurofins Lancaster Laboratories Env, LLC

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| New Jersey | NELAP | PA011 | 06-30-22 |

# Method Summary

Client: O & M Inc.
Job ID: 410-75934-1
Project/Site: D'Imperio Property Site

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8260D | Volatile Organic Compounds by GC/MS | SW846 | ELLE |
| 8270E | Semivolatile Organic Compounds (GC/MS) | SW846 | ELLE |
| EPA 300.0 R2.1 | Anions, Ion Chromatography | EPA | ELLE |
| 6010D | Metals (ICP) | SW846 | ELLE |
| 7470A | Mercury (CVAA) | SW846 | ELLE |
| 5210 B-2011 | BOD, 5-Day | SM | ELLE |
| 3005A | Preparation, Total Recoverable or Dissolved Metals | SW846 | ELLE |
| 3510C | Liquid-Liquid Extraction (Separatory Funnel) | SW846 | ELLE |
| 5030C | Purge and Trap | SW846 | ELLE |
| 7470A | Preparation, Mercury | SW846 | ELLE |

**Protocol References:**

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

# Sample Summary

Client: O & M Inc.
Job ID: 410-75934-1
Project/Site: D'Imperio Property Site

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 410-75934-1 | EFF/220311 | Water | 03/11/22 10:33 | 03/11/22 19:00 |
| 410-75934-2 | LEADBAC/220311 | Water | 03/11/22 10:39 | 03/11/22 19:00 |
| 410-75934-3 | BR/UC/220311 | Water | 03/11/22 10:46 | 03/11/22 19:00 |
| 410-75934-4 | LC2345/220311 | Water | 03/11/22 07:57 | 03/11/22 19:00 |
| 410-75934-5 | LC789/220311 | Water | 03/11/22 08:11 | 03/11/22 19:00 |
| 410-75934-6 | TB/220311 | Water | 03/11/22 00:00 | 03/11/22 19:00 |

**Eurofins Lancaster Laboratories Env, LLC**
2425 New Holland Pike
Lancaster, PA 17601
Phone: 717-656-2300 Fax: 717-656-2681

# Chain of Custody Record

410-75934 Chain of Custody

eurofins Environment Testing America

| Client Information | Sampler: STEPHEN BORTON | Lab PM: Weyandt, Barbara A | COC No: 0-51781-6703.1 |
|---|---|---|---|
| Client Contact: Steve Borton | Phone: 609-902-0624 | E-Mail: Barbara.Weyandt@eurofinset.com | State of Origin: NJ |
| Company: O & M Inc. | PWSID: | | Page: Page 1 of 1 |
| Address: 450 Montbrook Lane | Due Date Requested: STANDARD | | Job #: |
| City: Knoxville | TAT Requested (days): 14 DAYS. | | |
| State, Zip: TN, 37919-2705 | Compliance Project: X Yes Δ No | | |
| Phone: 609-868-0447(Tel) | PO #: ~~382A220112~~ 382A220311 | | |
| Email: sborton@oandm-inc.com | WO #: | | |
| Project Name: D'Imperio Property Site Quarterly | Project #: 41002088 | | |
| Site: New Jersey | SSOW#: | | |

**Analysis Requested**

| Sample Identification | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 8270E - Phenol | 300_ORGFM_28D - Chloride, Sulfate | SM5210B_Calc - BOD, 5-Day Only | 6010D, 7470A | 8260D - Monthly VOCs | 8270E_SIM_1,4-Dioxane (SB) | 8260D - VOC + Vinyl Chloride | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | X | X | N | N | N | D | A | N | | | |
| EFF/220311 | 3-11-22 | 1033 | G | W | | N | X | X | X | X | X | | | | |
| LEADBAC/220311 | ↓ | 1039 | ↓ | ↓ | | ↓ | ↓ | ↓ | ↓ | ↓ | X | ↓ | ↓ | | |
| BR/UC/220311 | | 1046 | | | | | | | | | | | X | | |
| LC2345/220311 | | 0757 | | | | | | | | | | | X | | |
| LC789/220311 | ↓ | 0811 | ↓ | ↓ | | ↓ | | | | | | | X | | |
| TB/220311 | 3-11-22 | | G | W | | N | | | | | | | X | | |

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

**Possible Hazard Identification**
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**
☐ Return To Client ☑ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by | Date/Time | Company | Received by | Date/Time | Company |
|---|---|---|---|---|---|---|
| | | | | | 3-10-22 1400 | O&M |
| | | 3/11/22 1530 | O&M | | 3-11-22 1637 | |
| | | 3.11.22 1853 | | Received by | 3/11/22 19:00 | ELUET |

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: not present

Cooler Temperature(s) °C and Other Remarks: 2.1°C

Ver 06/08/2021



3/22/2022

# Login Sample Receipt Checklist

Client: O & M Inc.

Job Number: 410-75934-1

**Login Number: 75934**
**List Number: 1**
**Creator: Renner, Melissa**

**List Source: Eurofins Lancaster Laboratories Env, LLC**

| Question | Answer | Comment |
|---|---|---|
| The cooler's custody seal is intact. | N/A | Not present |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable (</=6C, not frozen). | True | |
| Cooler Temperature is recorded. | True | |
| WV: Container Temperature is acceptable (</=6C, not frozen). | N/A | |
| WV:  Container Temperature is recorded. | N/A | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| There is sufficient vol. for all requested analyses. | True | |
| Is the Field Sampler's name present on COC? | True | |
| Sample custody seals are intact. | True | |

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# ANALYTICAL REPORT

Eurofins Lancaster Laboratories Env, LLC
2425 New Holland Pike
Lancaster, PA 17601
Tel: (717)656-2300

Laboratory Job ID: 410-75512-1
Client Project/Site: D'Imperio Property Site

For:
O & M Inc.
450 Montbrook Lane
Knoxville, Tennessee 37919-2705

Attn: Mr. Tom Thomas

Barb Weyandt

*Authorized for release by:*
*3/11/2022 9:28:21 AM*

Barbara Weyandt, Project Manager
(717)556-7264
Barbara.Weyandt@eurofinset.com

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.
· QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
· Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
· Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied, except as otherwise agreed. We disclaim any other warranties, expressed or implied, including a warranty of fitness for particular purpose and warranty of merchantability. In no event shall Eurofins Lancaster Laboratories Environmental, LLC be liable for indirect, special, consequential, or incidental damages including, but not limited to, damages for loss of profit or goodwill regardless of (A) the negligence (either sole or concurrent) of Eurofins Lancaster Laboratories Environmental and (B) whether Eurofins Lancaster Laboratories Environmental has been informed of the possibility of such damages. We accept no legal responsibility for the purposes for which the client uses the test results. Except as otherwise agreed, no purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Barb Weyandt

Barbara Weyandt
Project Manager
*3/11/2022 9:28:21 AM*

# Table of Contents

# Definitions/Glossary

Client: O & M Inc.
Job ID: 410-75512-1
Project/Site: D'Imperio Property Site

## Qualifiers

### GC/MS VOA

| Qualifier | Qualifier Description |
|---|---|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| 1C | Result is from the primary column on a dual-column method. |
| 2C | Result is from the confirmation column on a dual-column method. |
| CFL | Contains Free Liquid |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |
| TNTC | Too Numerous To Count |

# Case Narrative

Client: O & M Inc.
Project/Site: D'Imperio Property Site

Job ID: 410-75512-1

## Job ID: 410-75512-1

**Laboratory: Eurofins Lancaster Laboratories Env, LLC**

**Narrative**

**Job Narrative**
**410-75512-1**

**Receipt**

The samples were received on 3/9/2022 5:36 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.0°C

**GC/MS VOA**

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

# Detection Summary

Client: O & M Inc.
Job ID: 410-75512-1
Project/Site: D'Imperio Property Site

## Client Sample ID: MW-79-20220307 — Lab Sample ID: 410-75512-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | 0.65 | J | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |

## Client Sample ID: MW-80-20220307 — Lab Sample ID: 410-75512-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | 0.91 | J | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |

## Client Sample ID: MW-74-20220307 — Lab Sample ID: 410-75512-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | 0.86 | J | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |

## Client Sample ID: FB-20220307 — Lab Sample ID: 410-75512-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | 2.5 | | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |

## Client Sample ID: MW-41-20220308 — Lab Sample ID: 410-75512-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | 5.2 | | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |

## Client Sample ID: MW-24-1-20220308 — Lab Sample ID: 410-75512-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | 34 | | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |

## Client Sample ID: MW-49-20220308 — Lab Sample ID: 410-75512-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | 6.1 | | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |

## Client Sample ID: MW-56-20220308 — Lab Sample ID: 410-75512-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichloropropane | 0.79 | J | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| Chloroform | 2.0 | | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |

## Client Sample ID: OBW-62-20220308 — Lab Sample ID: 410-75512-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichloropropane | 2.3 | | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| Chloroform | 2.3 | | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| cis-1,2-Dichloroethene | 0.61 | J | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |

## Client Sample ID: OBW-63-20220308 — Lab Sample ID: 410-75512-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | 1.2 | | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |

## Client Sample ID: FB-20220308 — Lab Sample ID: 410-75512-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | 2.4 | | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

# Detection Summary

Client: O & M Inc.
Job ID: 410-75512-1
Project/Site: D'Imperio Property Site

## Client Sample ID: MW-55-20220309 — Lab Sample ID: 410-75512-12

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | 1.1 | | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |

## Client Sample ID: MW-59-20220309 — Lab Sample ID: 410-75512-13

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | 2.9 | | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |

## Client Sample ID: MW-28-1-20220309 — Lab Sample ID: 410-75512-14

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | 32 | | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |

## Client Sample ID: MW-28-2-20220309 — Lab Sample ID: 410-75512-15

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 0.43 | J | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| 1,2-Dichloroethane | 1.7 | | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| 1,2-Dichloropropane | 1.4 | | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| Benzene | 0.42 | J | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| cis-1,2-Dichloroethene | 3.5 | | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |

## Client Sample ID: MW-43-20220309 — Lab Sample ID: 410-75512-16

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 3.6 | | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| 1,1-Dichloroethene | 0.69 | J | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |

## Client Sample ID: FB-20220309 — Lab Sample ID: 410-75512-17

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | 2.6 | | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |

## Client Sample ID: TB-20220309 — Lab Sample ID: 410-75512-18

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

## Client Sample ID: MW-79-20220307
**Lab Sample ID: 410-75512-1**

**Date Collected: 03/07/22 11:50**
**Matrix: Groundwater**
**Date Received: 03/09/22 17:36**

### Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 01:01 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 01:01 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 01:01 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 01:01 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 01:01 | 1 |
| 2-Butanone | ND | | 10 | 0.50 | ug/L | | | 03/11/22 01:01 | 1 |
| Benzene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 01:01 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 01:01 | 1 |
| **Chloroform** | **0.65** | **J** | 1.0 | 0.30 | ug/L | | | 03/11/22 01:01 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 01:01 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.40 | ug/L | | | 03/11/22 01:01 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 01:01 | 1 |
| Toluene | ND | | 1.0 | 0.20 | ug/L | | | 03/11/22 01:01 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 01:01 | 1 |
| Trichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 01:01 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 01:01 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *93* | | *80 - 120* | | *03/11/22 01:01* | *1* |
| *4-Bromofluorobenzene (Surr)* | *92* | | *80 - 120* | | *03/11/22 01:01* | *1* |
| *Dibromofluoromethane (Surr)* | *92* | | *80 - 120* | | *03/11/22 01:01* | *1* |
| *Toluene-d8 (Surr)* | *101* | | *80 - 120* | | *03/11/22 01:01* | *1* |

## Client Sample ID: MW-80-20220307
**Lab Sample ID: 410-75512-2**

**Date Collected: 03/07/22 13:13**
**Matrix: Groundwater**
**Date Received: 03/09/22 17:36**

### Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:11 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:11 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:11 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:11 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:11 | 1 |
| 2-Butanone | ND | | 10 | 0.50 | ug/L | | | 03/11/22 02:11 | 1 |
| Benzene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:11 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:11 | 1 |
| **Chloroform** | **0.91** | **J** | 1.0 | 0.30 | ug/L | | | 03/11/22 02:11 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:11 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.40 | ug/L | | | 03/11/22 02:11 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:11 | 1 |
| Toluene | ND | | 1.0 | 0.20 | ug/L | | | 03/11/22 02:11 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:11 | 1 |
| Trichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:11 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:11 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *91* | | *80 - 120* | | *03/11/22 02:11* | *1* |
| *4-Bromofluorobenzene (Surr)* | *93* | | *80 - 120* | | *03/11/22 02:11* | *1* |
| *Dibromofluoromethane (Surr)* | *90* | | *80 - 120* | | *03/11/22 02:11* | *1* |

Client: O & M Inc.
Project/Site: D'Imperio Property Site

Job ID: 410-75512-1

## Client Sample ID: MW-80-20220307

**Lab Sample ID: 410-75512-2**

**Date Collected: 03/07/22 13:13**

**Matrix: Groundwater**

**Date Received: 03/09/22 17:36**

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *99* | | *80 - 120* | | *03/11/22 02:11* | *1* |

## Client Sample ID: MW-74-20220307

**Lab Sample ID: 410-75512-3**

**Date Collected: 03/07/22 15:33**

**Matrix: Groundwater**

**Date Received: 03/09/22 17:36**

### Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:34 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:34 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:34 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:34 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:34 | 1 |
| 2-Butanone | ND | | 10 | 0.50 | ug/L | | | 03/11/22 02:34 | 1 |
| Benzene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:34 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:34 | 1 |
| **Chloroform** | **0.86** | **J** | 1.0 | 0.30 | ug/L | | | 03/11/22 02:34 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:34 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.40 | ug/L | | | 03/11/22 02:34 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:34 | 1 |
| Toluene | ND | | 1.0 | 0.20 | ug/L | | | 03/11/22 02:34 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:34 | 1 |
| Trichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:34 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:34 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *92* | | *80 - 120* | | *03/11/22 02:34* | *1* |
| *4-Bromofluorobenzene (Surr)* | *94* | | *80 - 120* | | *03/11/22 02:34* | *1* |
| *Dibromofluoromethane (Surr)* | *89* | | *80 - 120* | | *03/11/22 02:34* | *1* |
| *Toluene-d8 (Surr)* | *101* | | *80 - 120* | | *03/11/22 02:34* | *1* |

## Client Sample ID: FB-20220307

**Lab Sample ID: 410-75512-4**

**Date Collected: 03/07/22 16:10**

**Matrix: Water**

**Date Received: 03/09/22 17:36**

### Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:28 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:28 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:28 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:28 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:28 | 1 |
| 2-Butanone | ND | | 10 | 0.50 | ug/L | | | 03/10/22 23:28 | 1 |
| Benzene | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:28 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:28 | 1 |
| **Chloroform** | **2.5** | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:28 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:28 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.40 | ug/L | | | 03/10/22 23:28 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:28 | 1 |
| Toluene | ND | | 1.0 | 0.20 | ug/L | | | 03/10/22 23:28 | 1 |

## Client Sample ID: FB-20220307
**Lab Sample ID: 410-75512-4**

**Date Collected: 03/07/22 16:10**
**Matrix: Water**
**Date Received: 03/09/22 17:36**

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:28 | 1 |
| Trichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:28 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:28 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *92* | | *80 - 120* | | *03/10/22 23:28* | *1* |
| *4-Bromofluorobenzene (Surr)* | *93* | | *80 - 120* | | *03/10/22 23:28* | *1* |
| *Dibromofluoromethane (Surr)* | *90* | | *80 - 120* | | *03/10/22 23:28* | *1* |
| *Toluene-d8 (Surr)* | *100* | | *80 - 120* | | *03/10/22 23:28* | *1* |

## Client Sample ID: MW-41-20220308
**Lab Sample ID: 410-75512-5**

**Date Collected: 03/08/22 10:01**
**Matrix: Groundwater**
**Date Received: 03/09/22 17:36**

### Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:57 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:57 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:57 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:57 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:57 | 1 |
| 2-Butanone | ND | | 10 | 0.50 | ug/L | | | 03/11/22 02:57 | 1 |
| Benzene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:57 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:57 | 1 |
| **Chloroform** | **5.2** | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:57 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:57 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.40 | ug/L | | | 03/11/22 02:57 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:57 | 1 |
| Toluene | ND | | 1.0 | 0.20 | ug/L | | | 03/11/22 02:57 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:57 | 1 |
| Trichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:57 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 02:57 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *92* | | *80 - 120* | | *03/11/22 02:57* | *1* |
| *4-Bromofluorobenzene (Surr)* | *95* | | *80 - 120* | | *03/11/22 02:57* | *1* |
| *Dibromofluoromethane (Surr)* | *92* | | *80 - 120* | | *03/11/22 02:57* | *1* |
| *Toluene-d8 (Surr)* | *100* | | *80 - 120* | | *03/11/22 02:57* | *1* |

## Client Sample ID: MW-24-1-20220308
**Lab Sample ID: 410-75512-6**

**Date Collected: 03/08/22 10:55**
**Matrix: Groundwater**
**Date Received: 03/09/22 17:36**

### Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 03:20 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 03:20 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 03:20 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 03:20 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 03:20 | 1 |
| 2-Butanone | ND | | 10 | 0.50 | ug/L | | | 03/11/22 03:20 | 1 |

## Client Sample ID: MW-24-1-20220308
**Lab Sample ID: 410-75512-6**

**Date Collected: 03/08/22 10:55**
**Matrix: Groundwater**
**Date Received: 03/09/22 17:36**

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 03:20 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 03:20 | 1 |
| **Chloroform** | **34** | | 1.0 | 0.30 | ug/L | | | 03/11/22 03:20 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 03:20 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.40 | ug/L | | | 03/11/22 03:20 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 03:20 | 1 |
| Toluene | ND | | 1.0 | 0.20 | ug/L | | | 03/11/22 03:20 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 03:20 | 1 |
| Trichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 03:20 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 03:20 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *95* | | *80 - 120* | | *03/11/22 03:20* | *1* |
| *4-Bromofluorobenzene (Surr)* | *93* | | *80 - 120* | | *03/11/22 03:20* | *1* |
| *Dibromofluoromethane (Surr)* | *92* | | *80 - 120* | | *03/11/22 03:20* | *1* |
| *Toluene-d8 (Surr)* | *100* | | *80 - 120* | | *03/11/22 03:20* | *1* |

## Client Sample ID: MW-49-20220308
**Lab Sample ID: 410-75512-7**

**Date Collected: 03/08/22 12:54**
**Matrix: Groundwater**
**Date Received: 03/09/22 17:36**

### Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 03:43 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 03:43 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 03:43 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 03:43 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 03:43 | 1 |
| 2-Butanone | ND | | 10 | 0.50 | ug/L | | | 03/11/22 03:43 | 1 |
| Benzene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 03:43 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 03:43 | 1 |
| **Chloroform** | **6.1** | | 1.0 | 0.30 | ug/L | | | 03/11/22 03:43 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 03:43 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.40 | ug/L | | | 03/11/22 03:43 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 03:43 | 1 |
| Toluene | ND | | 1.0 | 0.20 | ug/L | | | 03/11/22 03:43 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 03:43 | 1 |
| Trichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 03:43 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 03:43 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *91* | | *80 - 120* | | *03/11/22 03:43* | *1* |
| *4-Bromofluorobenzene (Surr)* | *94* | | *80 - 120* | | *03/11/22 03:43* | *1* |
| *Dibromofluoromethane (Surr)* | *91* | | *80 - 120* | | *03/11/22 03:43* | *1* |
| *Toluene-d8 (Surr)* | *100* | | *80 - 120* | | *03/11/22 03:43* | *1* |

## Client Sample ID: MW-56-20220308
**Lab Sample ID: 410-75512-8**

**Date Collected: 03/08/22 13:51**
**Matrix: Groundwater**
**Date Received: 03/09/22 17:36**

### Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:07 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:07 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:07 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:07 | 1 |
| **1,2-Dichloropropane** | **0.79** | **J** | 1.0 | 0.30 | ug/L | | | 03/11/22 04:07 | 1 |
| 2-Butanone | ND | | 10 | 0.50 | ug/L | | | 03/11/22 04:07 | 1 |
| Benzene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:07 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:07 | 1 |
| **Chloroform** | **2.0** | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:07 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:07 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.40 | ug/L | | | 03/11/22 04:07 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:07 | 1 |
| Toluene | ND | | 1.0 | 0.20 | ug/L | | | 03/11/22 04:07 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:07 | 1 |
| Trichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:07 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:07 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *95* | | *80 - 120* | | *03/11/22 04:07* | *1* |
| *4-Bromofluorobenzene (Surr)* | *92* | | *80 - 120* | | *03/11/22 04:07* | *1* |
| *Dibromofluoromethane (Surr)* | *91* | | *80 - 120* | | *03/11/22 04:07* | *1* |
| *Toluene-d8 (Surr)* | *99* | | *80 - 120* | | *03/11/22 04:07* | *1* |

## Client Sample ID: OBW-62-20220308
**Lab Sample ID: 410-75512-9**

**Date Collected: 03/08/22 14:57**
**Matrix: Groundwater**
**Date Received: 03/09/22 17:36**

### Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:30 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:30 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:30 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:30 | 1 |
| **1,2-Dichloropropane** | **2.3** | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:30 | 1 |
| 2-Butanone | ND | | 10 | 0.50 | ug/L | | | 03/11/22 04:30 | 1 |
| Benzene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:30 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:30 | 1 |
| **Chloroform** | **2.3** | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:30 | 1 |
| **cis-1,2-Dichloroethene** | **0.61** | **J** | 1.0 | 0.30 | ug/L | | | 03/11/22 04:30 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.40 | ug/L | | | 03/11/22 04:30 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:30 | 1 |
| Toluene | ND | | 1.0 | 0.20 | ug/L | | | 03/11/22 04:30 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:30 | 1 |
| Trichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:30 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:30 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *94* | | *80 - 120* | | *03/11/22 04:30* | *1* |
| *4-Bromofluorobenzene (Surr)* | *94* | | *80 - 120* | | *03/11/22 04:30* | *1* |
| *Dibromofluoromethane (Surr)* | *90* | | *80 - 120* | | *03/11/22 04:30* | *1* |

Client: O & M Inc.
Project/Site: D'Imperio Property Site

Job ID: 410-75512-1

## Client Sample ID: OBW-62-20220308

**Lab Sample ID: 410-75512-9**

**Date Collected: 03/08/22 14:57**

**Matrix: Groundwater**

**Date Received: 03/09/22 17:36**

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *102* | | *80 - 120* | | *03/11/22 04:30* | *1* |

## Client Sample ID: OBW-63-20220308

**Lab Sample ID: 410-75512-10**

**Date Collected: 03/08/22 16:16**

**Matrix: Groundwater**

**Date Received: 03/09/22 17:36**

### Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:53 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:53 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:53 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:53 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:53 | 1 |
| 2-Butanone | ND | | 10 | 0.50 | ug/L | | | 03/11/22 04:53 | 1 |
| Benzene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:53 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:53 | 1 |
| **Chloroform** | **1.2** | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:53 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:53 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.40 | ug/L | | | 03/11/22 04:53 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:53 | 1 |
| Toluene | ND | | 1.0 | 0.20 | ug/L | | | 03/11/22 04:53 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:53 | 1 |
| Trichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:53 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 04:53 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *92* | | *80 - 120* | | *03/11/22 04:53* | *1* |
| *4-Bromofluorobenzene (Surr)* | *94* | | *80 - 120* | | *03/11/22 04:53* | *1* |
| *Dibromofluoromethane (Surr)* | *91* | | *80 - 120* | | *03/11/22 04:53* | *1* |
| *Toluene-d8 (Surr)* | *100* | | *80 - 120* | | *03/11/22 04:53* | *1* |

## Client Sample ID: FB-20220308

**Lab Sample ID: 410-75512-11**

**Date Collected: 03/08/22 16:35**

**Matrix: Water**

**Date Received: 03/09/22 17:36**

### Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:52 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:52 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:52 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:52 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:52 | 1 |
| 2-Butanone | ND | | 10 | 0.50 | ug/L | | | 03/10/22 23:52 | 1 |
| Benzene | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:52 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:52 | 1 |
| **Chloroform** | **2.4** | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:52 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:52 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.40 | ug/L | | | 03/10/22 23:52 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:52 | 1 |
| Toluene | ND | | 1.0 | 0.20 | ug/L | | | 03/10/22 23:52 | 1 |

## Client Sample ID: FB-20220308
**Lab Sample ID: 410-75512-11**

**Date Collected: 03/08/22 16:35**
**Matrix: Water**
**Date Received: 03/09/22 17:36**

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:52 | 1 |
| Trichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:52 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:52 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *95* | | *80 - 120* | | *03/10/22 23:52* | *1* |
| *4-Bromofluorobenzene (Surr)* | *95* | | *80 - 120* | | *03/10/22 23:52* | *1* |
| *Dibromofluoromethane (Surr)* | *91* | | *80 - 120* | | *03/10/22 23:52* | *1* |
| *Toluene-d8 (Surr)* | *101* | | *80 - 120* | | *03/10/22 23:52* | *1* |

## Client Sample ID: MW-55-20220309
**Lab Sample ID: 410-75512-12**

**Date Collected: 03/09/22 09:10**
**Matrix: Groundwater**
**Date Received: 03/09/22 17:36**

### Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 05:16 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 05:16 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 05:16 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 05:16 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 05:16 | 1 |
| 2-Butanone | ND | | 10 | 0.50 | ug/L | | | 03/11/22 05:16 | 1 |
| Benzene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 05:16 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 05:16 | 1 |
| **Chloroform** | **1.1** | | 1.0 | 0.30 | ug/L | | | 03/11/22 05:16 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 05:16 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.40 | ug/L | | | 03/11/22 05:16 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 05:16 | 1 |
| Toluene | ND | | 1.0 | 0.20 | ug/L | | | 03/11/22 05:16 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 05:16 | 1 |
| Trichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 05:16 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 05:16 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *93* | | *80 - 120* | | *03/11/22 05:16* | *1* |
| *4-Bromofluorobenzene (Surr)* | *92* | | *80 - 120* | | *03/11/22 05:16* | *1* |
| *Dibromofluoromethane (Surr)* | *91* | | *80 - 120* | | *03/11/22 05:16* | *1* |
| *Toluene-d8 (Surr)* | *100* | | *80 - 120* | | *03/11/22 05:16* | *1* |

## Client Sample ID: MW-59-20220309
**Lab Sample ID: 410-75512-13**

**Date Collected: 03/09/22 10:03**
**Matrix: Groundwater**
**Date Received: 03/09/22 17:36**

### Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 05:39 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 05:39 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 05:39 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 05:39 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 05:39 | 1 |
| 2-Butanone | ND | | 10 | 0.50 | ug/L | | | 03/11/22 05:39 | 1 |

## Client Sample ID: MW-59-20220309
**Lab Sample ID: 410-75512-13**

**Date Collected: 03/09/22 10:03**
**Matrix: Groundwater**
**Date Received: 03/09/22 17:36**

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 05:39 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 05:39 | 1 |
| **Chloroform** | **2.9** | | 1.0 | 0.30 | ug/L | | | 03/11/22 05:39 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 05:39 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.40 | ug/L | | | 03/11/22 05:39 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 05:39 | 1 |
| Toluene | ND | | 1.0 | 0.20 | ug/L | | | 03/11/22 05:39 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 05:39 | 1 |
| Trichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 05:39 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 05:39 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *93* | | *80 - 120* | | *03/11/22 05:39* | *1* |
| *4-Bromofluorobenzene (Surr)* | *91* | | *80 - 120* | | *03/11/22 05:39* | *1* |
| *Dibromofluoromethane (Surr)* | *92* | | *80 - 120* | | *03/11/22 05:39* | *1* |
| *Toluene-d8 (Surr)* | *99* | | *80 - 120* | | *03/11/22 05:39* | *1* |

## Client Sample ID: MW-28-1-20220309
**Lab Sample ID: 410-75512-14**

**Date Collected: 03/09/22 11:40**
**Matrix: Groundwater**
**Date Received: 03/09/22 17:36**

### Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:02 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:02 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:02 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:02 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:02 | 1 |
| 2-Butanone | ND | | 10 | 0.50 | ug/L | | | 03/11/22 06:02 | 1 |
| Benzene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:02 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:02 | 1 |
| **Chloroform** | **32** | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:02 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:02 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.40 | ug/L | | | 03/11/22 06:02 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:02 | 1 |
| Toluene | ND | | 1.0 | 0.20 | ug/L | | | 03/11/22 06:02 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:02 | 1 |
| Trichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:02 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:02 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *93* | | *80 - 120* | | *03/11/22 06:02* | *1* |
| *4-Bromofluorobenzene (Surr)* | *92* | | *80 - 120* | | *03/11/22 06:02* | *1* |
| *Dibromofluoromethane (Surr)* | *92* | | *80 - 120* | | *03/11/22 06:02* | *1* |
| *Toluene-d8 (Surr)* | *99* | | *80 - 120* | | *03/11/22 06:02* | *1* |

## Client Sample ID: MW-28-2-20220309
**Lab Sample ID: 410-75512-15**

**Date Collected: 03/09/22 12:23**
**Matrix: Groundwater**
**Date Received: 03/09/22 17:36**

### Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:25 | 1 |
| **1,1-Dichloroethane** | **0.43** | **J** | 1.0 | 0.30 | ug/L | | | 03/11/22 06:25 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:25 | 1 |
| **1,2-Dichloroethane** | **1.7** | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:25 | 1 |
| **1,2-Dichloropropane** | **1.4** | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:25 | 1 |
| 2-Butanone | ND | | 10 | 0.50 | ug/L | | | 03/11/22 06:25 | 1 |
| **Benzene** | **0.42** | **J** | 1.0 | 0.30 | ug/L | | | 03/11/22 06:25 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:25 | 1 |
| Chloroform | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:25 | 1 |
| **cis-1,2-Dichloroethene** | **3.5** | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:25 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.40 | ug/L | | | 03/11/22 06:25 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:25 | 1 |
| Toluene | ND | | 1.0 | 0.20 | ug/L | | | 03/11/22 06:25 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:25 | 1 |
| Trichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:25 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:25 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *93* | | *80 - 120* | | *03/11/22 06:25* | *1* |
| *4-Bromofluorobenzene (Surr)* | *92* | | *80 - 120* | | *03/11/22 06:25* | *1* |
| *Dibromofluoromethane (Surr)* | *90* | | *80 - 120* | | *03/11/22 06:25* | *1* |
| *Toluene-d8 (Surr)* | *99* | | *80 - 120* | | *03/11/22 06:25* | *1* |

## Client Sample ID: MW-43-20220309
**Lab Sample ID: 410-75512-16**

**Date Collected: 03/09/22 13:18**
**Matrix: Groundwater**
**Date Received: 03/09/22 17:36**

### Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:49 | 1 |
| **1,1-Dichloroethane** | **3.6** | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:49 | 1 |
| **1,1-Dichloroethene** | **0.69** | **J** | 1.0 | 0.30 | ug/L | | | 03/11/22 06:49 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:49 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:49 | 1 |
| 2-Butanone | ND | | 10 | 0.50 | ug/L | | | 03/11/22 06:49 | 1 |
| Benzene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:49 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:49 | 1 |
| Chloroform | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:49 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:49 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.40 | ug/L | | | 03/11/22 06:49 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:49 | 1 |
| Toluene | ND | | 1.0 | 0.20 | ug/L | | | 03/11/22 06:49 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:49 | 1 |
| Trichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:49 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 06:49 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *96* | | *80 - 120* | | *03/11/22 06:49* | *1* |
| *4-Bromofluorobenzene (Surr)* | *92* | | *80 - 120* | | *03/11/22 06:49* | *1* |
| *Dibromofluoromethane (Surr)* | *91* | | *80 - 120* | | *03/11/22 06:49* | *1* |

Client: O & M Inc.
Project/Site: D'Imperio Property Site

Job ID: 410-75512-1

## Client Sample ID: MW-43-20220309

**Lab Sample ID: 410-75512-16**

**Date Collected: 03/09/22 13:18**
**Matrix: Groundwater**
**Date Received: 03/09/22 17:36**

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *101* | | *80 - 120* | | *03/11/22 06:49* | *1* |

## Client Sample ID: FB-20220309

**Lab Sample ID: 410-75512-17**

**Date Collected: 03/09/22 13:40**
**Matrix: Water**
**Date Received: 03/09/22 17:36**

### Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 00:15 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 00:15 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 00:15 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 00:15 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 00:15 | 1 |
| 2-Butanone | ND | | 10 | 0.50 | ug/L | | | 03/11/22 00:15 | 1 |
| Benzene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 00:15 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 00:15 | 1 |
| **Chloroform** | **2.6** | | 1.0 | 0.30 | ug/L | | | 03/11/22 00:15 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 00:15 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.40 | ug/L | | | 03/11/22 00:15 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 00:15 | 1 |
| Toluene | ND | | 1.0 | 0.20 | ug/L | | | 03/11/22 00:15 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 00:15 | 1 |
| Trichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 00:15 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 00:15 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *94* | | *80 - 120* | | *03/11/22 00:15* | *1* |
| *4-Bromofluorobenzene (Surr)* | *94* | | *80 - 120* | | *03/11/22 00:15* | *1* |
| *Dibromofluoromethane (Surr)* | *91* | | *80 - 120* | | *03/11/22 00:15* | *1* |
| *Toluene-d8 (Surr)* | *100* | | *80 - 120* | | *03/11/22 00:15* | *1* |

## Client Sample ID: TB-20220309

**Lab Sample ID: 410-75512-18**

**Date Collected: 03/09/22 00:01**
**Matrix: Water**
**Date Received: 03/09/22 17:36**

### Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 00:38 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 00:38 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 00:38 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 00:38 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 00:38 | 1 |
| 2-Butanone | ND | | 10 | 0.50 | ug/L | | | 03/11/22 00:38 | 1 |
| Benzene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 00:38 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 00:38 | 1 |
| Chloroform | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 00:38 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 00:38 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.40 | ug/L | | | 03/11/22 00:38 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 00:38 | 1 |
| Toluene | ND | | 1.0 | 0.20 | ug/L | | | 03/11/22 00:38 | 1 |

Client: O & M Inc.
Job ID: 410-75512-1
Project/Site: D'Imperio Property Site

**Client Sample ID: TB-20220309**
**Lab Sample ID: 410-75512-18**
**Date Collected: 03/09/22 00:01**
**Matrix: Water**
**Date Received: 03/09/22 17:36**

**Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 00:38 | 1 |
| Trichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 00:38 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/11/22 00:38 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *92* | | *80 - 120* | | *03/11/22 00:38* | *1* |
| *4-Bromofluorobenzene (Surr)* | *92* | | *80 - 120* | | *03/11/22 00:38* | *1* |
| *Dibromofluoromethane (Surr)* | *92* | | *80 - 120* | | *03/11/22 00:38* | *1* |
| *Toluene-d8 (Surr)* | *101* | | *80 - 120* | | *03/11/22 00:38* | *1* |

# Surrogate Summary

Client: O & M Inc.
Job ID: 410-75512-1
Project/Site: D'Imperio Property Site

## Method: 8260D - Volatile Organic Compounds by GC/MS

**Matrix: Groundwater** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | |
|---|---|---|---|---|---|
| | | DCA | BFB | DBFM | TOL |
| Lab Sample ID | Client Sample ID | (80-120) | (80-120) | (80-120) | (80-120) |
| 410-75512-1 | MW-79-20220307 | 93 | 92 | 92 | 101 |
| 410-75512-1 MS | MW-79-20220307 MS | 91 | 93 | 93 | 99 |
| 410-75512-1 MSD | MW-79-20220307 MSD | 93 | 93 | 91 | 100 |
| 410-75512-2 | MW-80-20220307 | 91 | 93 | 90 | 99 |
| 410-75512-3 | MW-74-20220307 | 92 | 94 | 89 | 101 |
| 410-75512-5 | MW-41-20220308 | 92 | 95 | 92 | 100 |
| 410-75512-6 | MW-24-1-20220308 | 95 | 93 | 92 | 100 |
| 410-75512-7 | MW-49-20220308 | 91 | 94 | 91 | 100 |
| 410-75512-8 | MW-56-20220308 | 95 | 92 | 91 | 99 |
| 410-75512-9 | OBW-62-20220308 | 94 | 94 | 90 | 102 |
| 410-75512-10 | OBW-63-20220308 | 92 | 94 | 91 | 100 |
| 410-75512-12 | MW-55-20220309 | 93 | 92 | 91 | 100 |
| 410-75512-13 | MW-59-20220309 | 93 | 91 | 92 | 99 |
| 410-75512-14 | MW-28-1-20220309 | 93 | 92 | 92 | 99 |
| 410-75512-15 | MW-28-2-20220309 | 93 | 92 | 90 | 99 |
| 410-75512-16 | MW-43-20220309 | 96 | 92 | 91 | 101 |

**Surrogate Legend**

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

## Method: 8260D - Volatile Organic Compounds by GC/MS

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | |
|---|---|---|---|---|---|
| | | DCA | BFB | DBFM | TOL |
| Lab Sample ID | Client Sample ID | (80-120) | (80-120) | (80-120) | (80-120) |
| 410-75512-4 | FB-20220307 | 92 | 93 | 90 | 100 |
| 410-75512-11 | FB-20220308 | 95 | 95 | 91 | 101 |
| 410-75512-17 | FB-20220309 | 94 | 94 | 91 | 100 |
| 410-75512-18 | TB-20220309 | 92 | 92 | 92 | 101 |
| LCS 410-232382/4 | Lab Control Sample | 92 | 92 | 93 | 100 |
| MB 410-232382/6 | Method Blank | 94 | 93 | 91 | 100 |

**Surrogate Legend**

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

## Method: 8260D - Volatile Organic Compounds by GC/MS

**Lab Sample ID: MB 410-232382/6**
**Matrix: Water**
**Analysis Batch: 232382**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:05 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:05 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:05 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:05 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:05 | 1 |
| 2-Butanone | ND | | 10 | 0.50 | ug/L | | | 03/10/22 23:05 | 1 |
| Benzene | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:05 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:05 | 1 |
| Chloroform | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:05 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:05 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.40 | ug/L | | | 03/10/22 23:05 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:05 | 1 |
| Toluene | ND | | 1.0 | 0.20 | ug/L | | | 03/10/22 23:05 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:05 | 1 |
| Trichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:05 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/10/22 23:05 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *94* | | *80 - 120* | | *03/10/22 23:05* | *1* |
| *4-Bromofluorobenzene (Surr)* | *93* | | *80 - 120* | | *03/10/22 23:05* | *1* |
| *Dibromofluoromethane (Surr)* | *91* | | *80 - 120* | | *03/10/22 23:05* | *1* |
| *Toluene-d8 (Surr)* | *100* | | *80 - 120* | | *03/10/22 23:05* | *1* |

**Lab Sample ID: LCS 410-232382/4**
**Matrix: Water**
**Analysis Batch: 232382**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 20.0 | 16.0 | | ug/L | | 80 | 67 - 126 |
| 1,1-Dichloroethane | 20.0 | 16.1 | | ug/L | | 80 | 80 - 120 |
| 1,1-Dichloroethene | 20.0 | 17.1 | | ug/L | | 85 | 80 - 131 |
| 1,2-Dichloroethane | 20.0 | 17.1 | | ug/L | | 86 | 73 - 124 |
| 1,2-Dichloropropane | 20.0 | 16.6 | | ug/L | | 83 | 80 - 120 |
| 2-Butanone | 250 | 212 | | ug/L | | 85 | 59 - 135 |
| Benzene | 20.0 | 16.4 | | ug/L | | 82 | 80 - 120 |
| Chlorobenzene | 20.0 | 17.7 | | ug/L | | 88 | 80 - 120 |
| Chloroform | 20.0 | 17.0 | | ug/L | | 85 | 80 - 120 |
| cis-1,2-Dichloroethene | 20.0 | 17.0 | | ug/L | | 85 | 80 - 125 |
| Ethylbenzene | 20.0 | 17.3 | | ug/L | | 87 | 80 - 120 |
| Methylene Chloride | 20.0 | 17.7 | | ug/L | | 88 | 80 - 120 |
| Toluene | 20.0 | 17.1 | | ug/L | | 86 | 80 - 120 |
| trans-1,2-Dichloroethene | 20.0 | 16.6 | | ug/L | | 83 | 80 - 126 |
| Trichloroethene | 20.0 | 16.2 | | ug/L | | 81 | 80 - 120 |
| Tetrachloroethene | 20.0 | 17.4 | | ug/L | | 87 | 80 - 120 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *92* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *92* | | *80 - 120* |

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCS 410-232382/4**
**Matrix: Water**
**Analysis Batch: 232382**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| *Dibromofluoromethane (Surr)* | *93* | | *80 - 120* |
| *Toluene-d8 (Surr)* | *100* | | *80 - 120* |

**Lab Sample ID: 410-75512-1 MS**
**Matrix: Groundwater**
**Analysis Batch: 232382**

**Client Sample ID: MW-79-20220307 MS**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 20.0 | 19.1 | | ug/L | | 95 | 67 - 126 |
| 1,1-Dichloroethane | ND | | 20.0 | 17.9 | | ug/L | | 90 | 80 - 120 |
| 1,1-Dichloroethene | ND | | 20.0 | 20.6 | | ug/L | | 103 | 80 - 131 |
| 1,2-Dichloroethane | ND | | 20.0 | 17.5 | | ug/L | | 87 | 73 - 124 |
| 1,2-Dichloropropane | ND | | 20.0 | 18.3 | | ug/L | | 92 | 80 - 120 |
| 2-Butanone | ND | | 250 | 199 | | ug/L | | 80 | 59 - 135 |
| Benzene | ND | | 20.0 | 18.2 | | ug/L | | 91 | 80 - 120 |
| Chlorobenzene | ND | | 20.0 | 18.9 | | ug/L | | 95 | 80 - 120 |
| Chloroform | 0.65 | J | 20.0 | 19.0 | | ug/L | | 92 | 80 - 120 |
| cis-1,2-Dichloroethene | ND | | 20.0 | 18.7 | | ug/L | | 93 | 80 - 125 |
| Ethylbenzene | ND | | 20.0 | 19.5 | | ug/L | | 97 | 80 - 120 |
| Methylene Chloride | ND | | 20.0 | 19.0 | | ug/L | | 95 | 80 - 120 |
| Toluene | ND | | 20.0 | 18.8 | | ug/L | | 94 | 80 - 120 |
| trans-1,2-Dichloroethene | ND | | 20.0 | 19.0 | | ug/L | | 95 | 80 - 126 |
| Trichloroethene | ND | | 20.0 | 17.9 | | ug/L | | 89 | 80 - 120 |
| Tetrachloroethene | ND | | 20.0 | 20.3 | | ug/L | | 101 | 80 - 120 |

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *91* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *93* | | *80 - 120* |
| *Dibromofluoromethane (Surr)* | *93* | | *80 - 120* |
| *Toluene-d8 (Surr)* | *99* | | *80 - 120* |

**Lab Sample ID: 410-75512-1 MSD**
**Matrix: Groundwater**
**Analysis Batch: 232382**

**Client Sample ID: MW-79-20220307 MSD**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 20.0 | 18.7 | | ug/L | | 94 | 67 - 126 | 2 | 30 |
| 1,1-Dichloroethane | ND | | 20.0 | 18.0 | | ug/L | | 90 | 80 - 120 | 1 | 30 |
| 1,1-Dichloroethene | ND | | 20.0 | 20.2 | | ug/L | | 101 | 80 - 131 | 2 | 30 |
| 1,2-Dichloroethane | ND | | 20.0 | 18.1 | | ug/L | | 90 | 73 - 124 | 3 | 30 |
| 1,2-Dichloropropane | ND | | 20.0 | 18.8 | | ug/L | | 94 | 80 - 120 | 3 | 30 |
| 2-Butanone | ND | | 250 | 204 | | ug/L | | 82 | 59 - 135 | 3 | 30 |
| Benzene | ND | | 20.0 | 18.6 | | ug/L | | 93 | 80 - 120 | 3 | 30 |
| Chlorobenzene | ND | | 20.0 | 19.5 | | ug/L | | 98 | 80 - 120 | 3 | 30 |
| Chloroform | 0.65 | J | 20.0 | 19.4 | | ug/L | | 94 | 80 - 120 | 2 | 30 |
| cis-1,2-Dichloroethene | ND | | 20.0 | 19.1 | | ug/L | | 95 | 80 - 125 | 2 | 30 |
| Ethylbenzene | ND | | 20.0 | 20.0 | | ug/L | | 100 | 80 - 120 | 3 | 30 |
| Methylene Chloride | ND | | 20.0 | 18.6 | | ug/L | | 93 | 80 - 120 | 2 | 30 |

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: 410-75512-1 MSD**
**Client Sample ID: MW-79-20220307 MSD**
**Matrix: Groundwater**
**Prep Type: Total/NA**
**Analysis Batch: 232382**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ND | | 20.0 | 19.6 | | ug/L | | 98 | 80 - 120 | 4 | 30 |
| trans-1,2-Dichloroethene | ND | | 20.0 | 19.1 | | ug/L | | 96 | 80 - 126 | 0 | 30 |
| Trichloroethene | ND | | 20.0 | 18.8 | | ug/L | | 94 | 80 - 120 | 5 | 30 |
| Tetrachloroethene | ND | | 20.0 | 20.8 | | ug/L | | 104 | 80 - 120 | 3 | 30 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *93* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *93* | | *80 - 120* |
| *Dibromofluoromethane (Surr)* | *91* | | *80 - 120* |
| *Toluene-d8 (Surr)* | *100* | | *80 - 120* |

# QC Association Summary

Client: O & M Inc.
Job ID: 410-75512-1
Project/Site: D'Imperio Property Site

## GC/MS VOA

### Analysis Batch: 232382

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 410-75512-1 | MW-79-20220307 | Total/NA | Groundwater | 8260D | |
| 410-75512-2 | MW-80-20220307 | Total/NA | Groundwater | 8260D | |
| 410-75512-3 | MW-74-20220307 | Total/NA | Groundwater | 8260D | |
| 410-75512-4 | FB-20220307 | Total/NA | Water | 8260D | |
| 410-75512-5 | MW-41-20220308 | Total/NA | Groundwater | 8260D | |
| 410-75512-6 | MW-24-1-20220308 | Total/NA | Groundwater | 8260D | |
| 410-75512-7 | MW-49-20220308 | Total/NA | Groundwater | 8260D | |
| 410-75512-8 | MW-56-20220308 | Total/NA | Groundwater | 8260D | |
| 410-75512-9 | OBW-62-20220308 | Total/NA | Groundwater | 8260D | |
| 410-75512-10 | OBW-63-20220308 | Total/NA | Groundwater | 8260D | |
| 410-75512-11 | FB-20220308 | Total/NA | Water | 8260D | |
| 410-75512-12 | MW-55-20220309 | Total/NA | Groundwater | 8260D | |
| 410-75512-13 | MW-59-20220309 | Total/NA | Groundwater | 8260D | |
| 410-75512-14 | MW-28-1-20220309 | Total/NA | Groundwater | 8260D | |
| 410-75512-15 | MW-28-2-20220309 | Total/NA | Groundwater | 8260D | |
| 410-75512-16 | MW-43-20220309 | Total/NA | Groundwater | 8260D | |
| 410-75512-17 | FB-20220309 | Total/NA | Water | 8260D | |
| 410-75512-18 | TB-20220309 | Total/NA | Water | 8260D | |
| MB 410-232382/6 | Method Blank | Total/NA | Water | 8260D | |
| LCS 410-232382/4 | Lab Control Sample | Total/NA | Water | 8260D | |
| 410-75512-1 MS | MW-79-20220307 MS | Total/NA | Groundwater | 8260D | |
| 410-75512-1 MSD | MW-79-20220307 MSD | Total/NA | Groundwater | 8260D | |

# Lab Chronicle

Client: O & M Inc.
Job ID: 410-75512-1
Project/Site: D'Imperio Property Site

## Client Sample ID: MW-79-20220307
**Lab Sample ID: 410-75512-1**
**Date Collected: 03/07/22 11:50**
**Matrix: Groundwater**
**Date Received: 03/09/22 17:36**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 232382 | 03/11/22 01:01 | K4WN | ELLE |

## Client Sample ID: MW-80-20220307
**Lab Sample ID: 410-75512-2**
**Date Collected: 03/07/22 13:13**
**Matrix: Groundwater**
**Date Received: 03/09/22 17:36**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 232382 | 03/11/22 02:11 | K4WN | ELLE |

## Client Sample ID: MW-74-20220307
**Lab Sample ID: 410-75512-3**
**Date Collected: 03/07/22 15:33**
**Matrix: Groundwater**
**Date Received: 03/09/22 17:36**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 232382 | 03/11/22 02:34 | K4WN | ELLE |

## Client Sample ID: FB-20220307
**Lab Sample ID: 410-75512-4**
**Date Collected: 03/07/22 16:10**
**Matrix: Water**
**Date Received: 03/09/22 17:36**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 232382 | 03/10/22 23:28 | K4WN | ELLE |

## Client Sample ID: MW-41-20220308
**Lab Sample ID: 410-75512-5**
**Date Collected: 03/08/22 10:01**
**Matrix: Groundwater**
**Date Received: 03/09/22 17:36**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 232382 | 03/11/22 02:57 | K4WN | ELLE |

## Client Sample ID: MW-24-1-20220308
**Lab Sample ID: 410-75512-6**
**Date Collected: 03/08/22 10:55**
**Matrix: Groundwater**
**Date Received: 03/09/22 17:36**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 232382 | 03/11/22 03:20 | K4WN | ELLE |

## Client Sample ID: MW-49-20220308
**Lab Sample ID: 410-75512-7**
**Date Collected: 03/08/22 12:54**
**Matrix: Groundwater**
**Date Received: 03/09/22 17:36**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 232382 | 03/11/22 03:43 | K4WN | ELLE |

# Lab Chronicle

Client: O & M Inc.
Job ID: 410-75512-1
Project/Site: D'Imperio Property Site

## Client Sample ID: MW-56-20220308
**Lab Sample ID: 410-75512-8**
**Date Collected: 03/08/22 13:51**
**Matrix: Groundwater**
**Date Received: 03/09/22 17:36**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 232382 | 03/11/22 04:07 | K4WN | ELLE |

## Client Sample ID: OBW-62-20220308
**Lab Sample ID: 410-75512-9**
**Date Collected: 03/08/22 14:57**
**Matrix: Groundwater**
**Date Received: 03/09/22 17:36**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 232382 | 03/11/22 04:30 | K4WN | ELLE |

## Client Sample ID: OBW-63-20220308
**Lab Sample ID: 410-75512-10**
**Date Collected: 03/08/22 16:16**
**Matrix: Groundwater**
**Date Received: 03/09/22 17:36**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 232382 | 03/11/22 04:53 | K4WN | ELLE |

## Client Sample ID: FB-20220308
**Lab Sample ID: 410-75512-11**
**Date Collected: 03/08/22 16:35**
**Matrix: Water**
**Date Received: 03/09/22 17:36**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 232382 | 03/10/22 23:52 | K4WN | ELLE |

## Client Sample ID: MW-55-20220309
**Lab Sample ID: 410-75512-12**
**Date Collected: 03/09/22 09:10**
**Matrix: Groundwater**
**Date Received: 03/09/22 17:36**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 232382 | 03/11/22 05:16 | K4WN | ELLE |

## Client Sample ID: MW-59-20220309
**Lab Sample ID: 410-75512-13**
**Date Collected: 03/09/22 10:03**
**Matrix: Groundwater**
**Date Received: 03/09/22 17:36**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 232382 | 03/11/22 05:39 | K4WN | ELLE |

## Client Sample ID: MW-28-1-20220309
**Lab Sample ID: 410-75512-14**
**Date Collected: 03/09/22 11:40**
**Matrix: Groundwater**
**Date Received: 03/09/22 17:36**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 232382 | 03/11/22 06:02 | K4WN | ELLE |

# Lab Chronicle

Client: O & M Inc.
Job ID: 410-75512-1
Project/Site: D'Imperio Property Site

## Client Sample ID: MW-28-2-20220309
**Lab Sample ID: 410-75512-15**
**Date Collected: 03/09/22 12:23**
**Matrix: Groundwater**
**Date Received: 03/09/22 17:36**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 232382 | 03/11/22 06:25 | K4WN | ELLE |

## Client Sample ID: MW-43-20220309
**Lab Sample ID: 410-75512-16**
**Date Collected: 03/09/22 13:18**
**Matrix: Groundwater**
**Date Received: 03/09/22 17:36**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 232382 | 03/11/22 06:49 | K4WN | ELLE |

## Client Sample ID: FB-20220309
**Lab Sample ID: 410-75512-17**
**Date Collected: 03/09/22 13:40**
**Matrix: Water**
**Date Received: 03/09/22 17:36**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 232382 | 03/11/22 00:15 | K4WN | ELLE |

## Client Sample ID: TB-20220309
**Lab Sample ID: 410-75512-18**
**Date Collected: 03/09/22 00:01**
**Matrix: Water**
**Date Received: 03/09/22 17:36**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 232382 | 03/11/22 00:38 | K4WN | ELLE |

**Laboratory References:**

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

# Accreditation/Certification Summary

Client: O & M Inc.
Job ID: 410-75512-1
Project/Site: D'Imperio Property Site

## Laboratory: Eurofins Lancaster Laboratories Env, LLC

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| New Jersey | NELAP | PA011 | 06-30-22 |

# Method Summary

Client: O & M Inc.
Job ID: 410-75512-1
Project/Site: D'Imperio Property Site

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8260D | Volatile Organic Compounds by GC/MS | SW846 | ELLE |
| 5030C | Purge and Trap | SW846 | ELLE |

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

# Sample Summary

Client: O & M Inc.
Job ID: 410-75512-1
Project/Site: D'Imperio Property Site

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 410-75512-1 | MW-79-20220307 | Groundwater | 03/07/22 11:50 | 03/09/22 17:36 |
| 410-75512-2 | MW-80-20220307 | Groundwater | 03/07/22 13:13 | 03/09/22 17:36 |
| 410-75512-3 | MW-74-20220307 | Groundwater | 03/07/22 15:33 | 03/09/22 17:36 |
| 410-75512-4 | FB-20220307 | Water | 03/07/22 16:10 | 03/09/22 17:36 |
| 410-75512-5 | MW-41-20220308 | Groundwater | 03/08/22 10:01 | 03/09/22 17:36 |
| 410-75512-6 | MW-24-1-20220308 | Groundwater | 03/08/22 10:55 | 03/09/22 17:36 |
| 410-75512-7 | MW-49-20220308 | Groundwater | 03/08/22 12:54 | 03/09/22 17:36 |
| 410-75512-8 | MW-56-20220308 | Groundwater | 03/08/22 13:51 | 03/09/22 17:36 |
| 410-75512-9 | OBW-62-20220308 | Groundwater | 03/08/22 14:57 | 03/09/22 17:36 |
| 410-75512-10 | OBW-63-20220308 | Groundwater | 03/08/22 16:16 | 03/09/22 17:36 |
| 410-75512-11 | FB-20220308 | Water | 03/08/22 16:35 | 03/09/22 17:36 |
| 410-75512-12 | MW-55-20220309 | Groundwater | 03/09/22 09:10 | 03/09/22 17:36 |
| 410-75512-13 | MW-59-20220309 | Groundwater | 03/09/22 10:03 | 03/09/22 17:36 |
| 410-75512-14 | MW-28-1-20220309 | Groundwater | 03/09/22 11:40 | 03/09/22 17:36 |
| 410-75512-15 | MW-28-2-20220309 | Groundwater | 03/09/22 12:23 | 03/09/22 17:36 |
| 410-75512-16 | MW-43-20220309 | Groundwater | 03/09/22 13:18 | 03/09/22 17:36 |
| 410-75512-17 | FB-20220309 | Water | 03/09/22 13:40 | 03/09/22 17:36 |
| 410-75512-18 | TB-20220309 | Water | 03/09/22 00:01 | 03/09/22 17:36 |

410-75512 Chain of Custody

:nv, LLC

# Chain of Custody Record

eurofins Environment Testing America

| | | | | |
|---|---|---|---|---|
| | Sampler: MHM / RK | Lab PM: Weyandt, Barbara A | Carrier Tracking No(s): | COC No: 410-50845-10389.1 |
| Client Contact: Charles Meyn | Phone: | E-Mail: Barbara.Weyandt@eurofinset.com | State of Origin: | Page: Page 1 of 3 |
| Company: O & M Inc | PWSID: | | | Job #: |
| Address: 450 Montbrook Lane | Due Date Requested: | | | |
| City: Knoxville | TAT Requested (days): | | | |
| State, Zip: TN, 37919-2705 | Compliance Project: Δ Yes Δ No | | | |
| Phone: 609-868-0447(Tel) | PO #: 382A220112 | | | |
| Email: cmeyn@brwncald.com | WO #: | | | |
| Project Name: D'Imperio Property Site | Project #: 41002088 | | | |
| Site: New Jersey | SSOW#: | | | |

**Analysis Requested**

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 8260D - (MOD) Monthly VOCs | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | A | | |
| MW-79-20220307 (MS/MSD) | 03/07/22 | 1150 | G | GW | N | Y | X | 3 | Perform (MS/MSD) |
| MW-80-20220307 | | 1313 | G | GW | N | N | X | 3 | |
| MW-74-20220307 | | 1533 | G | GW | N | N | X | 3 | |
| FB-20220307 | | 1610 | G | AI | N | N | X | 3 | |
| MW-41-20220308 | 03/08/22 | 1001 | G | GW | N | N | X | 3 | |
| MW-24-1-20220308 | | 1055 | G | GW | N | N | X | 3 | |
| MW-49-20220308 | | 1254 | G | GW | N | N | X | 3 | |
| MW-56-20220308 | | 1351 | G | GW | N | N | X | 3 | |
| OBW-62-20220308 | | 1457 | G | GW | N | N | X | 3 | |
| OBW-63-20220308 | | 1616 | G | GW | N | N | X | 3 | |
| FB-20220308 | | 1635 | G | AI | W | N | X | 3 | |

**Possible Hazard Identification**

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**

☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) RC Equis

Special Instructions/QC Requirements:

| | | | |
|---|---|---|---|
| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
| Relinquished by: MHM / [signature] | Date/Time: 03/09/22 1430 | Company | Received by: [signature] Date/Time: 3/9/22 1728 Company |
| Relinquished by: [signature] | Date/Time: 3-9-22 1736 | Company | Received by: Date/Time: Company |
| Relinquished by: | Date/Time: | Company | Received by: [signature] Date/Time: 3/9/22 1736 Company: ECLET |
| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: not present | | Cooler Temperature(s) °C and Other Remarks: 1.0°C |

Ver 06/08/2021

**Eurofins Lancaster Laboratories Env, LLC**
2425 New Holland Pike
Lancaster, PA 17601
Phone: 717-656-2300 Fax: 717-656-2681

# Chain of Custody Record

eurofins Environment Testing America

| Client Information | Sampler: MHM / RK | Lab PM: Weyandt, Barbara A | Carrier Tracking No(s): | COC No: 410-50845-10389.3 |
|---|---|---|---|---|
| Client Contact: Charles Meyn | Phone: | E-Mail: Barbara.Weyandt@eurofinset.com | State of Origin: | Page: Page 3 of 3 |
| Company: O & M Inc. | PWSID: | | | Job #: |
| Address: 450 Montbrook Lane | Due Date Requested: | | | |
| City: Knoxville | TAT Requested (days): Standard | | | |
| State, Zip: TN, 37919-2705 | Compliance Project: Δ Yes Δ No | | | |
| Phone: 609-868-0447(Tel) | PO #: 382A220112 | | | |
| Email: cmeyn@brwncald.com | WO #: | | | |
| Project Name: D'Imperio Property Site | Project #: 41002088 | | | |
| Site: New Jersey | SSOW#: | | | |

**Analysis Requested**

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

| Sample Identification | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Y) | 8260D - (MOD) Monthly VOCs | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | A | | |
| MW-55-20220309 | 03/09/22 | 0910 | G | GW | N | N | X | 3 | |
| MW-59-20220309 | 03/09/22 | 1003 | G | GW | N | N | X | 3 | |
| MW-28-1-20220309 | 03/09/22 | 1140 | G | GW | N | N | X | 3 | |
| MW-28-2-20220309 | 03/09/22 | 1223 | G | GW | N | N | X | 3 | |
| MW-43-20220309 | 03/09/22 | 1318 | G | GW | N | N | X | 3 | |
| FB-20220309 | 03/09/22 | 1340 | G | DI | N | N | X | 3 | |
| TR-20220309 | 03/09/22 | 0001 | G | DI | N | N | X | 2 | |

*Possible Hazard Identification*
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

*Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)*
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify): BC EQuIS

Special Instructions/QC Requirements:

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by | Date/Time | Company | Received by | Date/Time | Company |
|---|---|---|---|---|---|---|
| 1 | MAX (Courier) | 03/09/22 1430 | | | 3/9/22 1422 | |
| 2 | | 3/9/22 1736 | | | | |
| 3 | | | | | 9/9/22 1736 | ECLET |

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.: not present
Cooler Temperature(s) °C and Other Remarks: 1.0°C

Ver: 06/08/2021

# Login Sample Receipt Checklist

Client: O & M Inc.

Job Number: 410-75512-1

**Login Number: 75512**

**List Source: Eurofins Lancaster Laboratories Env, LLC**

**List Number: 1**

**Creator: Renner, Melissa**

| Question | Answer | Comment |
|---|---|---|
| The cooler's custody seal is intact. | N/A | Not present. |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable (</=6C, not frozen). | True | |
| Cooler Temperature is recorded. | True | |
| WV: Container Temperature is acceptable (</=6C, not frozen). | N/A | |
| WV: Container Temperature is recorded. | N/A | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| There is sufficient vol. for all requested analyses. | True | |
| Is the Field Sampler's name present on COC? | True | |
| Sample custody seals are intact. | True | |

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# ANALYTICAL REPORT

Eurofins Lancaster Laboratories Env, LLC
2425 New Holland Pike
Lancaster, PA 17601
Tel: (717)656-2300

Laboratory Job ID: 410-75949-1
Client Project/Site: D'Imperio Property Site

For:
O & M Inc.
450 Montbrook Lane
Knoxville, Tennessee 37919-2705

Attn: Mr. Tom Thomas

Barb Weyandt

*Authorized for release by:*
*3/16/2022 1:12:56 PM*

Barbara Weyandt, Project Manager
(717)556-7264
Barbara.Weyandt@eurofinset.com

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.
· QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
· Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
· Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied, except as otherwise agreed. We disclaim any other warranties, expressed or implied, including a warranty of fitness for particular purpose and warranty of merchantability. In no event shall Eurofins Lancaster Laboratories Environmental, LLC be liable for indirect, special, consequential, or incidental damages including, but not limited to, damages for loss of profit or goodwill regardless of (A) the negligence (either sole or concurrent) of Eurofins Lancaster Laboratories Environmental and (B) whether Eurofins Lancaster Laboratories Environmental has been informed of the possibility of such damages. We accept no legal responsibility for the purposes for which the client uses the test results. Except as otherwise agreed, no purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Barb Weyandt

Barbara Weyandt
Project Manager
*3/16/2022 1:12:57 PM*

# Table of Contents

# Definitions/Glossary

Client: O & M Inc. Job ID: 410-75949-1
Project/Site: D'Imperio Property Site

## Qualifiers

### GC/MS VOA

| Qualifier | Qualifier Description |
|---|---|
| cn | Refer to Case Narrative for further detail |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| 1C | Result is from the primary column on a dual-column method. |
| 2C | Result is from the confirmation column on a dual-column method. |
| CFL | Contains Free Liquid |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |
| TNTC | Too Numerous To Count |

## Job ID: 410-75949-1

**Laboratory: Eurofins Lancaster Laboratories Env, LLC**

**Narrative**

**Job Narrative**
**410-75949-1**

**Receipt**
The samples were received on 3/11/2022 6:59 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.7°C

**Receipt Exceptions**
The Field Sampler was not listed on the Chain of Custody.

**GC/MS VOA**
Method 8260D: The continuing calibration verification (CCV) associated with batch 410-233939 recovered outside acceptance criteria, low biased, for 1,1-Dichloroethene. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Non-detections of the affected analytes are reported. Any detections are considered estimated.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

# Detection Summary

Client: O & M Inc.
Project/Site: D'Imperio Property Site

Job ID: 410-75949-1

## Client Sample ID: MW-73-20220310 — Lab Sample ID: 410-75949-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | 0.39 | J cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |

## Client Sample ID: MW-70-20220310 — Lab Sample ID: 410-75949-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 0.50 | J cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| 1,2-Dichloroethane | 2.9 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| 1,2-Dichloropropane | 3.2 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| Chloroform | 2.6 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| cis-1,2-Dichloroethene | 1.5 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| Trichloroethene | 2.8 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |

## Client Sample ID: MW-71-20220310 — Lab Sample ID: 410-75949-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 0.46 | J cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| 1,2-Dichloroethane | 1.5 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| 1,2-Dichloropropane | 5.3 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| Chloroform | 4.3 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| cis-1,2-Dichloroethene | 2.0 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| Trichloroethene | 0.89 | J cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |

## Client Sample ID: MW-69-20220310 — Lab Sample ID: 410-75949-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 0.73 | J cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| 1,2-Dichloroethane | 3.7 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| 1,2-Dichloropropane | 6.1 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| Chloroform | 3.2 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| cis-1,2-Dichloroethene | 3.4 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| Trichloroethene | 2.7 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |

## Client Sample ID: MW-24-2-R-20220310 — Lab Sample ID: 410-75949-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 1.1 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| 1,2-Dichloroethane | 0.66 | J cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| Benzene | 1.2 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| cis-1,2-Dichloroethene | 4.2 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| Ethylbenzene | 8.5 | cn | 1.0 | 0.40 | ug/L | 1 | | 8260D | Total/NA |
| Toluene | 0.82 | J cn | 1.0 | 0.20 | ug/L | 1 | | 8260D | Total/NA |

## Client Sample ID: FB-20220310 — Lab Sample ID: 410-75949-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | 2.3 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |

## Client Sample ID: TB-20220310 — Lab Sample ID: 410-75949-7

No Detections.

## Client Sample ID: DUP-20220310 — Lab Sample ID: 410-75949-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 0.69 | J cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

## Client Sample ID: DUP-20220310 (Continued)
## Lab Sample ID: 410-75949-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | 3.9 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| 1,2-Dichloropropane | 6.4 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| Chloroform | 3.3 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| cis-1,2-Dichloroethene | 3.7 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |
| Trichloroethene | 2.7 | cn | 1.0 | 0.30 | ug/L | 1 | | 8260D | Total/NA |

## Client Sample ID: MW-73-20220310
**Lab Sample ID: 410-75949-1**

**Date Collected: 03/10/22 09:26**
**Matrix: Ground Water**
**Date Received: 03/11/22 18:59**

### Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 01:41 | 1 |
| 1,1-Dichloroethane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 01:41 | 1 |
| 1,1-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 01:41 | 1 |
| 1,2-Dichloroethane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 01:41 | 1 |
| 1,2-Dichloropropane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 01:41 | 1 |
| 2-Butanone | ND | cn | 10 | 0.50 | ug/L | | | 03/16/22 01:41 | 1 |
| Benzene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 01:41 | 1 |
| Chlorobenzene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 01:41 | 1 |
| **Chloroform** | **0.39** | **J cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 01:41 | 1 |
| cis-1,2-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 01:41 | 1 |
| Ethylbenzene | ND | cn | 1.0 | 0.40 | ug/L | | | 03/16/22 01:41 | 1 |
| Methylene Chloride | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 01:41 | 1 |
| Toluene | ND | cn | 1.0 | 0.20 | ug/L | | | 03/16/22 01:41 | 1 |
| trans-1,2-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 01:41 | 1 |
| Trichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 01:41 | 1 |
| Tetrachloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 01:41 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *106* | *cn* | *80 - 120* | | *03/16/22 01:41* | *1* |
| *4-Bromofluorobenzene (Surr)* | *95* | *cn* | *80 - 120* | | *03/16/22 01:41* | *1* |
| *Dibromofluoromethane (Surr)* | *103* | *cn* | *80 - 120* | | *03/16/22 01:41* | *1* |
| *Toluene-d8 (Surr)* | *99* | *cn* | *80 - 120* | | *03/16/22 01:41* | *1* |

## Client Sample ID: MW-70-20220310
**Lab Sample ID: 410-75949-2**

**Date Collected: 03/10/22 10:45**
**Matrix: Ground Water**
**Date Received: 03/11/22 18:59**

### Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 02:03 | 1 |
| **1,1-Dichloroethane** | **0.50** | **J cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 02:03 | 1 |
| 1,1-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 02:03 | 1 |
| **1,2-Dichloroethane** | **2.9** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 02:03 | 1 |
| **1,2-Dichloropropane** | **3.2** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 02:03 | 1 |
| 2-Butanone | ND | cn | 10 | 0.50 | ug/L | | | 03/16/22 02:03 | 1 |
| Benzene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 02:03 | 1 |
| Chlorobenzene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 02:03 | 1 |
| **Chloroform** | **2.6** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 02:03 | 1 |
| **cis-1,2-Dichloroethene** | **1.5** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 02:03 | 1 |
| Ethylbenzene | ND | cn | 1.0 | 0.40 | ug/L | | | 03/16/22 02:03 | 1 |
| Methylene Chloride | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 02:03 | 1 |
| Toluene | ND | cn | 1.0 | 0.20 | ug/L | | | 03/16/22 02:03 | 1 |
| trans-1,2-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 02:03 | 1 |
| **Trichloroethene** | **2.8** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 02:03 | 1 |
| Tetrachloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 02:03 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *107* | *cn* | *80 - 120* | | *03/16/22 02:03* | *1* |
| *4-Bromofluorobenzene (Surr)* | *95* | *cn* | *80 - 120* | | *03/16/22 02:03* | *1* |
| *Dibromofluoromethane (Surr)* | *103* | *cn* | *80 - 120* | | *03/16/22 02:03* | *1* |

## Client Sample ID: MW-70-20220310
**Lab Sample ID: 410-75949-2**

**Date Collected: 03/10/22 10:45**
**Matrix: Ground Water**
**Date Received: 03/11/22 18:59**

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *100* | *cn* | *80 - 120* | | *03/16/22 02:03* | *1* |

## Client Sample ID: MW-71-20220310
**Lab Sample ID: 410-75949-3**

**Date Collected: 03/10/22 11:43**
**Matrix: Ground Water**
**Date Received: 03/11/22 18:59**

### Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 02:25 | 1 |
| **1,1-Dichloroethane** | **0.46** | **J cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 02:25 | 1 |
| 1,1-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 02:25 | 1 |
| **1,2-Dichloroethane** | **1.5** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 02:25 | 1 |
| **1,2-Dichloropropane** | **5.3** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 02:25 | 1 |
| 2-Butanone | ND | cn | 10 | 0.50 | ug/L | | | 03/16/22 02:25 | 1 |
| Benzene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 02:25 | 1 |
| Chlorobenzene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 02:25 | 1 |
| **Chloroform** | **4.3** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 02:25 | 1 |
| **cis-1,2-Dichloroethene** | **2.0** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 02:25 | 1 |
| Ethylbenzene | ND | cn | 1.0 | 0.40 | ug/L | | | 03/16/22 02:25 | 1 |
| Methylene Chloride | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 02:25 | 1 |
| Toluene | ND | cn | 1.0 | 0.20 | ug/L | | | 03/16/22 02:25 | 1 |
| trans-1,2-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 02:25 | 1 |
| **Trichloroethene** | **0.89** | **J cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 02:25 | 1 |
| Tetrachloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 02:25 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *108* | *cn* | *80 - 120* | | *03/16/22 02:25* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | *cn* | *80 - 120* | | *03/16/22 02:25* | *1* |
| *Dibromofluoromethane (Surr)* | *104* | *cn* | *80 - 120* | | *03/16/22 02:25* | *1* |
| *Toluene-d8 (Surr)* | *99* | *cn* | *80 - 120* | | *03/16/22 02:25* | *1* |

## Client Sample ID: MW-69-20220310
**Lab Sample ID: 410-75949-4**

**Date Collected: 03/10/22 13:46**
**Matrix: Ground Water**
**Date Received: 03/11/22 18:59**

### Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 02:47 | 1 |
| **1,1-Dichloroethane** | **0.73** | **J cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 02:47 | 1 |
| 1,1-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 02:47 | 1 |
| **1,2-Dichloroethane** | **3.7** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 02:47 | 1 |
| **1,2-Dichloropropane** | **6.1** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 02:47 | 1 |
| 2-Butanone | ND | cn | 10 | 0.50 | ug/L | | | 03/16/22 02:47 | 1 |
| Benzene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 02:47 | 1 |
| Chlorobenzene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 02:47 | 1 |
| **Chloroform** | **3.2** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 02:47 | 1 |
| **cis-1,2-Dichloroethene** | **3.4** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 02:47 | 1 |
| Ethylbenzene | ND | cn | 1.0 | 0.40 | ug/L | | | 03/16/22 02:47 | 1 |
| Methylene Chloride | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 02:47 | 1 |
| Toluene | ND | cn | 1.0 | 0.20 | ug/L | | | 03/16/22 02:47 | 1 |

## Client Sample ID: MW-69-20220310
**Lab Sample ID: 410-75949-4**

**Date Collected: 03/10/22 13:46**
**Matrix: Ground Water**
**Date Received: 03/11/22 18:59**

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 02:47 | 1 |
| **Trichloroethene** | **2.7** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 02:47 | 1 |
| Tetrachloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 02:47 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *106* | *cn* | *80 - 120* | | *03/16/22 02:47* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | *cn* | *80 - 120* | | *03/16/22 02:47* | *1* |
| *Dibromofluoromethane (Surr)* | *102* | *cn* | *80 - 120* | | *03/16/22 02:47* | *1* |
| *Toluene-d8 (Surr)* | *100* | *cn* | *80 - 120* | | *03/16/22 02:47* | *1* |

## Client Sample ID: MW-24-2-R-20220310
**Lab Sample ID: 410-75949-5**

**Date Collected: 03/10/22 14:45**
**Matrix: Ground Water**
**Date Received: 03/11/22 18:59**

### Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 03:09 | 1 |
| **1,1-Dichloroethane** | **1.1** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 03:09 | 1 |
| 1,1-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 03:09 | 1 |
| **1,2-Dichloroethane** | **0.66** | **J cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 03:09 | 1 |
| 1,2-Dichloropropane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 03:09 | 1 |
| 2-Butanone | ND | cn | 10 | 0.50 | ug/L | | | 03/16/22 03:09 | 1 |
| **Benzene** | **1.2** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 03:09 | 1 |
| Chlorobenzene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 03:09 | 1 |
| Chloroform | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 03:09 | 1 |
| **cis-1,2-Dichloroethene** | **4.2** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 03:09 | 1 |
| **Ethylbenzene** | **8.5** | **cn** | 1.0 | 0.40 | ug/L | | | 03/16/22 03:09 | 1 |
| Methylene Chloride | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 03:09 | 1 |
| **Toluene** | **0.82** | **J cn** | 1.0 | 0.20 | ug/L | | | 03/16/22 03:09 | 1 |
| trans-1,2-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 03:09 | 1 |
| Trichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 03:09 | 1 |
| Tetrachloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 03:09 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *106* | *cn* | *80 - 120* | | *03/16/22 03:09* | *1* |
| *4-Bromofluorobenzene (Surr)* | *99* | *cn* | *80 - 120* | | *03/16/22 03:09* | *1* |
| *Dibromofluoromethane (Surr)* | *101* | *cn* | *80 - 120* | | *03/16/22 03:09* | *1* |
| *Toluene-d8 (Surr)* | *99* | *cn* | *80 - 120* | | *03/16/22 03:09* | *1* |

## Client Sample ID: FB-20220310
**Lab Sample ID: 410-75949-6**

**Date Collected: 03/10/22 15:00**
**Matrix: Water**
**Date Received: 03/11/22 18:59**

### Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 21:38 | 1 |
| 1,1-Dichloroethane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 21:38 | 1 |
| 1,1-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 21:38 | 1 |
| 1,2-Dichloroethane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 21:38 | 1 |
| 1,2-Dichloropropane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 21:38 | 1 |
| 2-Butanone | ND | cn | 10 | 0.50 | ug/L | | | 03/15/22 21:38 | 1 |

## Client Sample ID: FB-20220310
**Lab Sample ID: 410-75949-6**

**Date Collected: 03/10/22 15:00**
**Matrix: Water**
**Date Received: 03/11/22 18:59**

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 21:38 | 1 |
| Chlorobenzene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 21:38 | 1 |
| **Chloroform** | **2.3** | **cn** | 1.0 | 0.30 | ug/L | | | 03/15/22 21:38 | 1 |
| cis-1,2-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 21:38 | 1 |
| Ethylbenzene | ND | cn | 1.0 | 0.40 | ug/L | | | 03/15/22 21:38 | 1 |
| Methylene Chloride | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 21:38 | 1 |
| Toluene | ND | cn | 1.0 | 0.20 | ug/L | | | 03/15/22 21:38 | 1 |
| trans-1,2-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 21:38 | 1 |
| Trichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 21:38 | 1 |
| Tetrachloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 21:38 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *106* | *cn* | *80 - 120* | | *03/15/22 21:38* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | *cn* | *80 - 120* | | *03/15/22 21:38* | *1* |
| *Dibromofluoromethane (Surr)* | *103* | *cn* | *80 - 120* | | *03/15/22 21:38* | *1* |
| *Toluene-d8 (Surr)* | *100* | *cn* | *80 - 120* | | *03/15/22 21:38* | *1* |

## Client Sample ID: TB-20220310
**Lab Sample ID: 410-75949-7**

**Date Collected: 03/04/22 00:01**
**Matrix: Water**
**Date Received: 03/11/22 18:59**

### Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 22:00 | 1 |
| 1,1-Dichloroethane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 22:00 | 1 |
| 1,1-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 22:00 | 1 |
| 1,2-Dichloroethane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 22:00 | 1 |
| 1,2-Dichloropropane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 22:00 | 1 |
| 2-Butanone | ND | cn | 10 | 0.50 | ug/L | | | 03/15/22 22:00 | 1 |
| Benzene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 22:00 | 1 |
| Chlorobenzene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 22:00 | 1 |
| Chloroform | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 22:00 | 1 |
| cis-1,2-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 22:00 | 1 |
| Ethylbenzene | ND | cn | 1.0 | 0.40 | ug/L | | | 03/15/22 22:00 | 1 |
| Methylene Chloride | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 22:00 | 1 |
| Toluene | ND | cn | 1.0 | 0.20 | ug/L | | | 03/15/22 22:00 | 1 |
| trans-1,2-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 22:00 | 1 |
| Trichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 22:00 | 1 |
| Tetrachloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/15/22 22:00 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *107* | *cn* | *80 - 120* | | *03/15/22 22:00* | *1* |
| *4-Bromofluorobenzene (Surr)* | *98* | *cn* | *80 - 120* | | *03/15/22 22:00* | *1* |
| *Dibromofluoromethane (Surr)* | *102* | *cn* | *80 - 120* | | *03/15/22 22:00* | *1* |
| *Toluene-d8 (Surr)* | *100* | *cn* | *80 - 120* | | *03/15/22 22:00* | *1* |

Client: O & M Inc.
Project/Site: D'Imperio Property Site

Job ID: 410-75949-1

**Client Sample ID: DUP-20220310**
**Date Collected: 03/10/22 00:00**
**Date Received: 03/11/22 18:59**

**Lab Sample ID: 410-75949-8**
**Matrix: Ground Water**

### Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 03:31 | 1 |
| **1,1-Dichloroethane** | **0.69** | **J cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 03:31 | 1 |
| 1,1-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 03:31 | 1 |
| **1,2-Dichloroethane** | **3.9** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 03:31 | 1 |
| **1,2-Dichloropropane** | **6.4** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 03:31 | 1 |
| 2-Butanone | ND | cn | 10 | 0.50 | ug/L | | | 03/16/22 03:31 | 1 |
| Benzene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 03:31 | 1 |
| Chlorobenzene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 03:31 | 1 |
| **Chloroform** | **3.3** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 03:31 | 1 |
| **cis-1,2-Dichloroethene** | **3.7** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 03:31 | 1 |
| Ethylbenzene | ND | cn | 1.0 | 0.40 | ug/L | | | 03/16/22 03:31 | 1 |
| Methylene Chloride | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 03:31 | 1 |
| Toluene | ND | cn | 1.0 | 0.20 | ug/L | | | 03/16/22 03:31 | 1 |
| trans-1,2-Dichloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 03:31 | 1 |
| **Trichloroethene** | **2.7** | **cn** | 1.0 | 0.30 | ug/L | | | 03/16/22 03:31 | 1 |
| Tetrachloroethene | ND | cn | 1.0 | 0.30 | ug/L | | | 03/16/22 03:31 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *108* | *cn* | *80 - 120* | | *03/16/22 03:31* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | *cn* | *80 - 120* | | *03/16/22 03:31* | *1* |
| *Dibromofluoromethane (Surr)* | *104* | *cn* | *80 - 120* | | *03/16/22 03:31* | *1* |
| *Toluene-d8 (Surr)* | *100* | *cn* | *80 - 120* | | *03/16/22 03:31* | *1* |

# Surrogate Summary

Client: O & M Inc.
Job ID: 410-75949-1
Project/Site: D'Imperio Property Site

## Method: 8260D - Volatile Organic Compounds by GC/MS

**Matrix: Ground Water** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | |
|---|---|---|---|---|---|
| | | DCA | BFB | DBFM | TOL |
| Lab Sample ID | Client Sample ID | (80-120) | (80-120) | (80-120) | (80-120) |
| 410-75949-1 | MW-73-20220310 | 106 cn | 95 cn | 103 cn | 99 cn |
| 410-75949-2 | MW-70-20220310 | 107 cn | 95 cn | 103 cn | 100 cn |
| 410-75949-3 | MW-71-20220310 | 108 cn | 96 cn | 104 cn | 99 cn |
| 410-75949-4 | MW-69-20220310 | 106 cn | 96 cn | 102 cn | 100 cn |
| 410-75949-5 | MW-24-2-R-20220310 | 106 cn | 99 cn | 101 cn | 99 cn |
| 410-75949-8 | DUP-20220310 | 108 cn | 96 cn | 104 cn | 100 cn |

**Surrogate Legend**

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

## Method: 8260D - Volatile Organic Compounds by GC/MS

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | |
|---|---|---|---|---|---|
| | | DCA | BFB | DBFM | TOL |
| Lab Sample ID | Client Sample ID | (80-120) | (80-120) | (80-120) | (80-120) |
| 410-75949-6 | FB-20220310 | 106 cn | 96 cn | 103 cn | 100 cn |
| 410-75949-7 | TB-20220310 | 107 cn | 98 cn | 102 cn | 100 cn |
| LCS 410-233939/4 | Lab Control Sample | 105 | 99 | 102 | 101 |
| LCSD 410-233939/5 | Lab Control Sample Dup | 106 | 99 | 102 | 101 |
| MB 410-233939/7 | Method Blank | 107 | 97 | 103 | 99 |

**Surrogate Legend**

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

## Method: 8260D - Volatile Organic Compounds by GC/MS

**Lab Sample ID: MB 410-233939/7**
**Matrix: Water**
**Analysis Batch: 233939**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| 2-Butanone | ND | | 10 | 0.50 | ug/L | | | 03/15/22 20:32 | 1 |
| Benzene | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| Chloroform | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.40 | ug/L | | | 03/15/22 20:32 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| Toluene | ND | | 1.0 | 0.20 | ug/L | | | 03/15/22 20:32 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| Trichloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.30 | ug/L | | | 03/15/22 20:32 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *107* | | *80 - 120* | | *03/15/22 20:32* | *1* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *80 - 120* | | *03/15/22 20:32* | *1* |
| *Dibromofluoromethane (Surr)* | *103* | | *80 - 120* | | *03/15/22 20:32* | *1* |
| *Toluene-d8 (Surr)* | *99* | | *80 - 120* | | *03/15/22 20:32* | *1* |

**Lab Sample ID: LCS 410-233939/4**
**Matrix: Water**
**Analysis Batch: 233939**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 20.0 | 16.1 | | ug/L | | 80 | 67 - 126 |
| 1,1-Dichloroethane | 20.0 | 17.6 | | ug/L | | 88 | 80 - 120 |
| 1,1-Dichloroethene | 20.0 | 16.8 | | ug/L | | 84 | 80 - 131 |
| 1,2-Dichloroethane | 20.0 | 18.0 | | ug/L | | 90 | 73 - 124 |
| 1,2-Dichloropropane | 20.0 | 18.6 | | ug/L | | 93 | 80 - 120 |
| 2-Butanone | 250 | 290 | | ug/L | | 116 | 59 - 135 |
| Benzene | 20.0 | 17.6 | | ug/L | | 88 | 80 - 120 |
| Chlorobenzene | 20.0 | 17.2 | | ug/L | | 86 | 80 - 120 |
| Chloroform | 20.0 | 17.1 | | ug/L | | 86 | 80 - 120 |
| cis-1,2-Dichloroethene | 20.0 | 17.6 | | ug/L | | 88 | 80 - 125 |
| Ethylbenzene | 20.0 | 16.7 | | ug/L | | 84 | 80 - 120 |
| Methylene Chloride | 20.0 | 17.8 | | ug/L | | 89 | 80 - 120 |
| Toluene | 20.0 | 16.7 | | ug/L | | 84 | 80 - 120 |
| trans-1,2-Dichloroethene | 20.0 | 16.5 | | ug/L | | 83 | 80 - 126 |
| Trichloroethene | 20.0 | 17.2 | | ug/L | | 86 | 80 - 120 |
| Tetrachloroethene | 20.0 | 17.2 | | ug/L | | 86 | 80 - 120 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *105* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *80 - 120* |

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCS 410-233939/4**
**Matrix: Water**
**Analysis Batch: 233939**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| *Dibromofluoromethane (Surr)* | *102* | | *80 - 120* |
| *Toluene-d8 (Surr)* | *101* | | *80 - 120* |

**Lab Sample ID: LCSD 410-233939/5**
**Matrix: Water**
**Analysis Batch: 233939**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | | | 20.0 | 16.8 | | ug/L | | 84 | 67 - 126 | 4 | 30 |
| 1,1-Dichloroethane | | | 20.0 | 18.0 | | ug/L | | 90 | 80 - 120 | 2 | 30 |
| 1,1-Dichloroethene | | | 20.0 | 17.3 | | ug/L | | 87 | 80 - 131 | 3 | 30 |
| 1,2-Dichloroethane | | | 20.0 | 18.5 | | ug/L | | 92 | 73 - 124 | 3 | 30 |
| 1,2-Dichloropropane | | | 20.0 | 18.7 | | ug/L | | 94 | 80 - 120 | 1 | 30 |
| 2-Butanone | | | 250 | 293 | | ug/L | | 117 | 59 - 135 | 1 | 30 |
| Benzene | | | 20.0 | 17.8 | | ug/L | | 89 | 80 - 120 | 1 | 30 |
| Chlorobenzene | | | 20.0 | 17.4 | | ug/L | | 87 | 80 - 120 | 1 | 30 |
| Chloroform | | | 20.0 | 17.4 | | ug/L | | 87 | 80 - 120 | 2 | 30 |
| cis-1,2-Dichloroethene | | | 20.0 | 17.7 | | ug/L | | 89 | 80 - 125 | 1 | 30 |
| Ethylbenzene | | | 20.0 | 16.9 | | ug/L | | 84 | 80 - 120 | 1 | 30 |
| Methylene Chloride | | | 20.0 | 17.7 | | ug/L | | 88 | 80 - 120 | 1 | 30 |
| Toluene | | | 20.0 | 16.8 | | ug/L | | 84 | 80 - 120 | 0 | 30 |
| trans-1,2-Dichloroethene | | | 20.0 | 16.9 | | ug/L | | 84 | 80 - 126 | 2 | 30 |
| Trichloroethene | | | 20.0 | 17.0 | | ug/L | | 85 | 80 - 120 | 1 | 30 |
| Tetrachloroethene | | | 20.0 | 17.7 | | ug/L | | 88 | 80 - 120 | 3 | 30 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *106* | | *80 - 120* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *80 - 120* |
| *Dibromofluoromethane (Surr)* | *102* | | *80 - 120* |
| *Toluene-d8 (Surr)* | *101* | | *80 - 120* |

# QC Association Summary

Client: O & M Inc.
Job ID: 410-75949-1
Project/Site: D'Imperio Property Site

## GC/MS VOA

### Analysis Batch: 233939

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 410-75949-1 | MW-73-20220310 | Total/NA | Ground Water | 8260D | |
| 410-75949-2 | MW-70-20220310 | Total/NA | Ground Water | 8260D | |
| 410-75949-3 | MW-71-20220310 | Total/NA | Ground Water | 8260D | |
| 410-75949-4 | MW-69-20220310 | Total/NA | Ground Water | 8260D | |
| 410-75949-5 | MW-24-2-R-20220310 | Total/NA | Ground Water | 8260D | |
| 410-75949-6 | FB-20220310 | Total/NA | Water | 8260D | |
| 410-75949-7 | TB-20220310 | Total/NA | Water | 8260D | |
| 410-75949-8 | DUP-20220310 | Total/NA | Ground Water | 8260D | |
| MB 410-233939/7 | Method Blank | Total/NA | Water | 8260D | |
| LCS 410-233939/4 | Lab Control Sample | Total/NA | Water | 8260D | |
| LCSD 410-233939/5 | Lab Control Sample Dup | Total/NA | Water | 8260D | |

# Lab Chronicle

Client: O & M Inc.
Job ID: 410-75949-1
Project/Site: D'Imperio Property Site

## Client Sample ID: MW-73-20220310
**Lab Sample ID: 410-75949-1**
**Date Collected: 03/10/22 09:26**
**Matrix: Ground Water**
**Date Received: 03/11/22 18:59**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 233939 | 03/16/22 01:41 | K4WN | ELLE |

## Client Sample ID: MW-70-20220310
**Lab Sample ID: 410-75949-2**
**Date Collected: 03/10/22 10:45**
**Matrix: Ground Water**
**Date Received: 03/11/22 18:59**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 233939 | 03/16/22 02:03 | K4WN | ELLE |

## Client Sample ID: MW-71-20220310
**Lab Sample ID: 410-75949-3**
**Date Collected: 03/10/22 11:43**
**Matrix: Ground Water**
**Date Received: 03/11/22 18:59**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 233939 | 03/16/22 02:25 | K4WN | ELLE |

## Client Sample ID: MW-69-20220310
**Lab Sample ID: 410-75949-4**
**Date Collected: 03/10/22 13:46**
**Matrix: Ground Water**
**Date Received: 03/11/22 18:59**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 233939 | 03/16/22 02:47 | K4WN | ELLE |

## Client Sample ID: MW-24-2-R-20220310
**Lab Sample ID: 410-75949-5**
**Date Collected: 03/10/22 14:45**
**Matrix: Ground Water**
**Date Received: 03/11/22 18:59**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 233939 | 03/16/22 03:09 | K4WN | ELLE |

## Client Sample ID: FB-20220310
**Lab Sample ID: 410-75949-6**
**Date Collected: 03/10/22 15:00**
**Matrix: Water**
**Date Received: 03/11/22 18:59**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 233939 | 03/15/22 21:38 | K4WN | ELLE |

## Client Sample ID: TB-20220310
**Lab Sample ID: 410-75949-7**
**Date Collected: 03/04/22 00:01**
**Matrix: Water**
**Date Received: 03/11/22 18:59**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 233939 | 03/15/22 22:00 | K4WN | ELLE |

# Lab Chronicle

Client: O & M Inc.
Job ID: 410-75949-1
Project/Site: D'Imperio Property Site

**Client Sample ID: DUP-20220310**
**Lab Sample ID: 410-75949-8**
**Date Collected: 03/10/22 00:00**
**Matrix: Ground Water**
**Date Received: 03/11/22 18:59**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260D | | 1 | 233939 | 03/16/22 03:31 | K4WN | ELLE |

**Laboratory References:**

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

# Accreditation/Certification Summary

Client: O & M Inc.
Job ID: 410-75949-1
Project/Site: D'Imperio Property Site

## Laboratory: Eurofins Lancaster Laboratories Env, LLC

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| New Jersey | NELAP | PA011 | 06-30-22 |

# Method Summary

Client: O & M Inc.
Job ID: 410-75949-1
Project/Site: D'Imperio Property Site

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8260D | Volatile Organic Compounds by GC/MS | SW846 | ELLE |
| 5030C | Purge and Trap | SW846 | ELLE |

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

# Sample Summary

Client: O & M Inc.
Job ID: 410-75949-1
Project/Site: D'Imperio Property Site

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 410-75949-1 | MW-73-20220310 | Ground Water | 03/10/22 09:26 | 03/11/22 18:59 |
| 410-75949-2 | MW-70-20220310 | Ground Water | 03/10/22 10:45 | 03/11/22 18:59 |
| 410-75949-3 | MW-71-20220310 | Ground Water | 03/10/22 11:43 | 03/11/22 18:59 |
| 410-75949-4 | MW-69-20220310 | Ground Water | 03/10/22 13:46 | 03/11/22 18:59 |
| 410-75949-5 | MW-24-2-R-20220310 | Ground Water | 03/10/22 14:45 | 03/11/22 18:59 |
| 410-75949-6 | FB-20220310 | Water | 03/10/22 15:00 | 03/11/22 18:59 |
| 410-75949-7 | TB-20220310 | Water | 03/04/22 00:01 | 03/11/22 18:59 |
| 410-75949-8 | DUP-20220310 | Ground Water | 03/10/22 00:00 | 03/11/22 18:59 |

**Eurofins Lancaster Laboratories Env, LLC**
2425 New Holland Pike
Lancaster, PA 17601
Phone: 717-656-2300 Fax: 717-656-2681

# Chain of Custody Record

eurofins Environment Testing America

410-75949 Chain of Custody

| Client Information | Sampler | Lab PM: Weyandt, Barbara A | COC No: 410-50845-10389.2 |
|---|---|---|---|
| Client Contact: Charles Meyn | Phone | E-Mail: Barbara.Weyandt@eurofinset.com | State of Origin: | Page: Page 2 of 3 |
| Company: O & M Inc. | PWSID: | Analysis Requested | Job #: |
| Address: 450 Montbrook Lane | Due Date Requested: | | Preservation Codes: |
| City: Knoxville | TAT Requested (days): Standard | | A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify) |
| State, Zip: TN, 37919-2705 | Compliance Project: Δ Yes Δ No | | |
| Phone: 609-868-0447(Tel) | PO #: 382A220112 | | Other: |
| Email: cmeyn@brwncald.com | WO #: | | |
| Project Name: D'Imperio Property Site | Project #: 41002088 | | |
| Site: New Jersey | SSOW#: | | |

| Sample Identification | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 8260D - (MOD) Monthly VOCs | Total Number of Containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | A | | |
| MW-73-20220310 | 03/10/22 | 0926 | G | GW | N | N | X | 3 | |
| MW-70-20220310 | 03/10/22 | 1045 | G | GW | N | N | X | 3 | |
| MW-71-20220310 | 03/10/22 | 1143 | G | GW | N | N | X | 3 | |
| MW-69-20220310 | 03/10/22 | 1346 | G | GW | N | N | X | 3 | |
| MW-24-2-R-20220310 | 03/10/22 | 1445 | G | GW | N | N | X | 3 | |
| FB-20220310 | 03/10/22 | 1500 | G | DI | N | N | X | 3 | |
| TB-20220310 | 03/04/22 | 0001 | G | DI | N | N | X | 2 | |
| DUP-20220310 | 03/10/22 | 9999 | G | GW | N | N | X | 3 | |

**Possible Hazard Identification**
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**
☐ Return To Client ☑ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) EQuIS

Special Instructions/QC Requirements:

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by | Date/Time | Company | Received by | Date/Time | Company |
|---|---|---|---|---|---|---|
| 1 | MAX MAZZ | 3/11/22 16:25 | | | 3/11/22 16:25 | ELLE |
| 2 | | 3/11/22 19:00 | ELLE | | | |
| 3 | | | | | 3-11-22 1859 | ELLE |

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 1.7

Ver: 06/08/2021

# ATTACHMENT 7

# 1H-22 Data Verification Report

## D'Imperio Property Site
## Semi-Annual (1H-2022)
## Groundwater Sampling Report

# Data Verification Report Groundwater Quality Monitoring Data

# 1st Half 2022 Semi-Annual Sampling Event, March 2022

## Introduction

This Data Verification Report addresses the 1st half 2022 (1H22) semi-annual sampling event that was performed during the first quarter of 2022 (1Q22) at the D'Imperio Property Site. The 1H22 sampling event was performed between March 7, 2022 and March 10, 2022.

The data verification has been performed in accordance with the Long-Term Groundwater Monitoring Plan, Revision 3A" "LTGMP-3A", (Brown and Caldwell, April 2020) including the updated "Quality Assurance Project Plan" (QAPP), (Brown and Caldwell, April 2020). These documents are consistent with the "Approval with Modifications" letter from Ms. Kim O'Connell of USEPA dated March 13, 2020.

## Summary of Findings

The collection of the field samples for 1H22 was performed using methods and techniques as documented in the LTGMP-3A and the QAPP. Only wells monitored on a semi-annual basis were sampled as part of this event. The 1H22 sampling event included the following samples as listed in Table 2-1 of the LTGMP-3A:

- 19 monitoring wells ("MW" and "OBW" series).
- Seven (7) field Quality Assurance/Quality Control (QA/QC) samples including four (4) field blanks ("FB"), two (2) trip blanks, and one (1) blind field duplicate ("DUP").
- Samples from one (1) monitoring well were collected in triplicate to be utilized for laboratory QA/QC purposes as a matrix spike/matrix spike duplicate (MS/MSD).

One additional sample from BR-3-E was collected by the operations contractor (O&M, Inc.) from the site extraction wells per Table 2-1 of the LTGMP-3A. Results from these samples will be reported in the Semi-Annual (1H-22) Groundwater Sampling Report and the 2022 Annual Groundwater Report.

Each well was sampled for volatile organic compounds (VOCs) by 8260D. Per the revised analytical parameters specified in the LTGMP-3A, three parameters (2-butanone, chlorobenzene, and methylene chloride) that were included in prior sampling events were omitted. The non-performance standard VOC vinyl chloride was added to the analyte list.

Based on a review of field and laboratory documentation for 1H22, the field sampling program and laboratory testing have yielded acceptable results per the verification criteria as described in the LTGMP-3A and the QAPP. In review of field documentation from the 1H22 semi-annual sampling event, it has been concluded that each sample was collected and documented in accordance with the LTGMP-3A and

QAPP with no substantive deviations from these documents. Laboratory analytical data for the samples listed below have been received, reviewed, and a completeness check was performed. Following the initial review and completeness check, the electronic data deliverable (EDD) was uploaded into the existing database.

A review of the analytical data reports revealed that each sample collected during 1H22 was analyzed within the required holding times and the required analyses were performed per approved methods. The project performance criteria have been met by the laboratory Method Detection Limits (MDLs) for the analytes.

## Sample Delivery Group (SDG) 410-75512-1

Samples from the listed sample delivery group (SDG) were collected from March 7 through March 9, 2022. Each sample in the SDG is listed below with the corresponding laboratory identification provided in parenthesis.

- MW-79-20220307 (410-755-12-1)
- MW-80-20220307 (410-755-12-2)
- MW-74-20220307 (410-755-12-3)
- FB-20220307 (410-755-12-4)
- MW-41-20220308 (410-755-12-5)
- MW-24-1-20220308 (410-755-12-6)
- MW-49-20220308 (410-755-12-7)
- MW-56-20220308 (410-755-12-8)
- OBW-62-20220308 (410-755-12-9)
- OBS-63-20220308 (410-755-12-10)
- FB-20220308 (410-755-12-11)
- MW-55-20220309 (410-755-12-12)
- MW-59-250220309 (410-755-12-13)
- MW-28-1-20220309 (410-755-12-14)
- MW-28-2-20220309 (410-755-12-15)
- MW-43-20220309 (410-755-12-16)
- FB-20220309 (410-755-12-17)
- TB-20220309 (410-755-12-18)

### Comparison to Prior Samples

Based on comparison and evaluation, results from the monitoring well samples are generally consistent with previous sampling data. Data observations of note are provided for the wells listed below:

**MW-80 -** The 1H22 sampling event included Lower Cohansey Detached Plume (LCDP) Sentinel well MW-80 which is located downgradient of the three LCDP extraction wells (LC-7E, LC-8E and LC-9E). No Performance Standard VOCs, excluding chloroform, were detected in MW-80. These results are consistent with prior data.

**MW-79 -** The 1H22 sampling event included LCDP Sentinel well MW-79 which is located downgradient of the three LCDP extraction wells (LC-7E, LC-8E and LC-9E). No Performance Standard VOCs, excluding chloroform, were detected in in wells MW-79. These results are consistent with prior data.

**OBW-62** – The 1H22 sampling event revealed a TVOC concentration (excluding chloroform) of 2.91 µg/L (J-qualified) in OBW-62 which is located downgradient of Lower Cohansey Main Plume extraction wells

LC-3E and LC-4E. This TVOC is a reduction from the 2H21 result of 6.78 µg/L (J-qualified). Concentrations in this well will continue to be monitored to confirm whether the installation of new groundwater extraction pumps in extraction wells LC-3-E and LC-4-E have mitigated potential breakthrough between these wells.

MW-55, MW-56, MW-59 and OBW-63 - Constituent concentrations detected in the Lower Cohansey Main Plume sentinel wells MW-55, MW-56, MW-59 and OBW-63 were below Performance Standard levels during the 1H22 sampling event.

### Other QA/QC Criteria Evaluation for SDG 410-75512-1

Observations of QA/QC criteria for the SDG are listed below:

- The three field blanks were found to be non-detect for each of the analyzed parameters with the exception of chloroform which was detected between 2.4 and 2.6 ug/L in each field blank.
- The trip blank analysis resulted in non-detects for each of the analyzed parameters.
- The surrogate percent recoveries were each within prescribed measurement performance criteria for each sample.
- The laboratory control sample (LCS) percent recoveries were each within prescribed measurement performance criteria.
- The MS/MSD recoveries were each within prescribed performance criteria.

## Sample Delivery Group (SDG) 410-75949-1

Samples from the listed SDG were collected on March 10, 2022. Each sample in the SDG is listed below with the corresponding laboratory identification provided in parenthesis.

- MW-73-20220310 (410-75949-1)
- MW-70-20220310 (410-75949-2)
- MW-71-20220310 (410-75949-3)
- MW-69-20220310 (410-75949-4)
- MW-24-2-R-20220310 (410-75949-5)
- FB-20220310 (410-75949-6)
- TB-20220310 (410-75949-7)
- DUP-20220310 (410-75949-8) - Duplicate of MW-69-20220310

### Comparison to Prior Samples

Based on comparison and evaluation, results from the monitoring well samples were generally consistent with previous sampling data. Data observations of note are provided for the wells listed below:

**MW-71** - MW-71 is intended to define the southeasterly sidegradient extent of the LCDP (toward the Hamilton Preserve) as discussed in the LCDP Delineation Report (Brown and Caldwell, August 2014). For this sampling event, MW-71 was found to have a TVOC concentration of 10.15 ug/l, which is a decrease from the concentration of 17.24 µg/L detected during the 2H21 sampling event.

**MW-69 –** At the time of installation, MW-69 was positioned in the approximate center of mass of the LCDP. In the 1H21 sampling event, the TVOC concentration in MW-69 was 16.63 µg/L, a decrease from the 19.63 µg/L concentration detected in 2H21 and well below the 120.8 µg/L concentration detected during the 3Q19 sampling event. This lower range of concentrations in recent sampling events suggests that the center of mass of the LCDP has migrated downgradient towards the extraction well array.

### Other QA/QC Criteria Evaluation for SDG 410-75949-1

Observations of QA/QC criteria for the SDG are listed below:

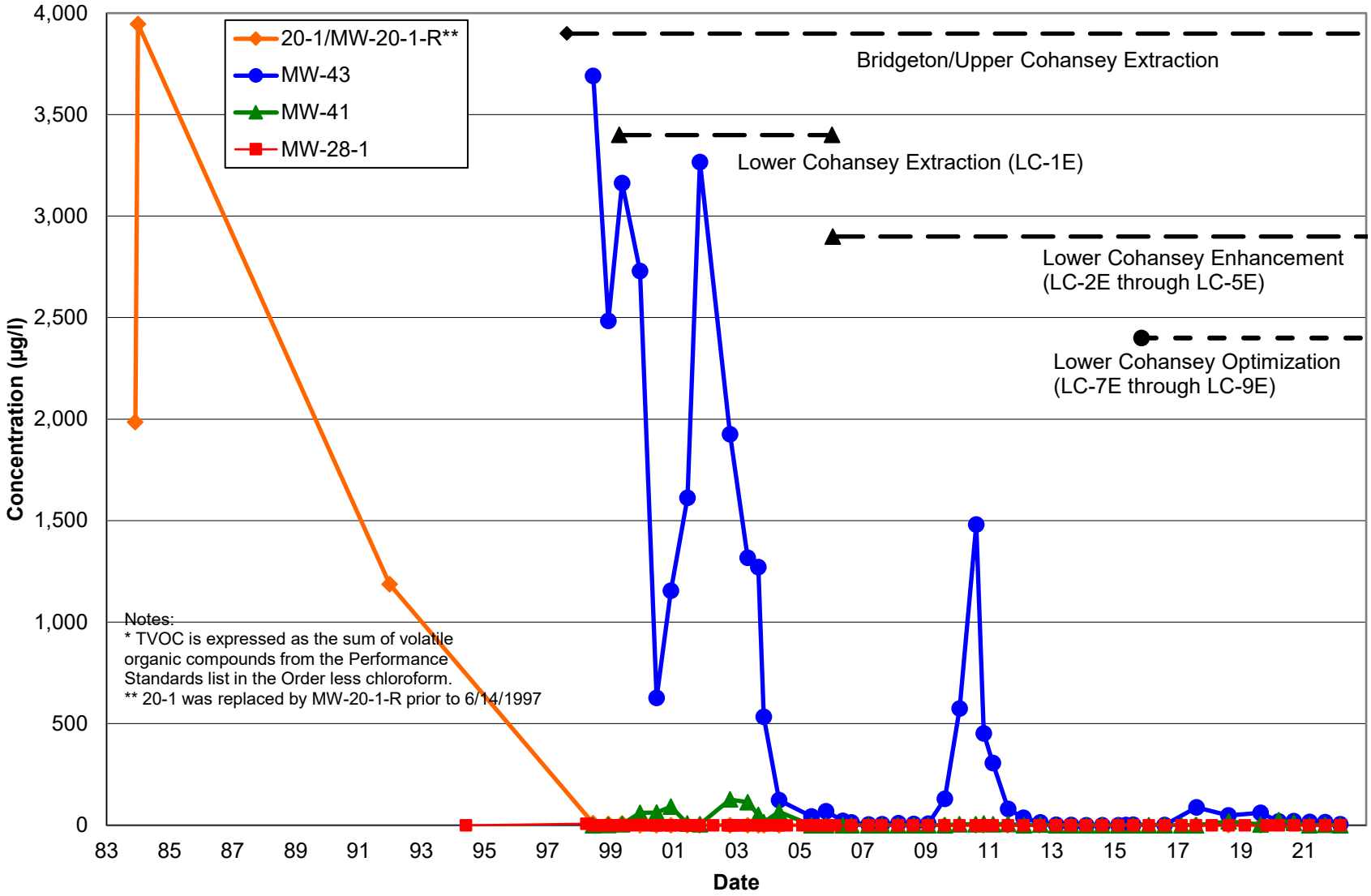
- The analysis of the field blank, FB-20220310 resulted in non-detects for each of the analyzed parameters.
- The trip blank analysis resulted in non-detects for each of the analyzed parameters.
- The sample results for the duplicate sample DUP-20220310 were consistent with the results of the parent sample MW-69-20220310.
- The surrogate percent recoveries were each within prescribed measurement performance criteria for each sample.
- The laboratory control sample (LCS) percent recoveries were each within prescribed measurement performance criteria.

# ATTACHMENT 8

## Long-Term TVOC Trends
## (Graphs for each Aquifer)

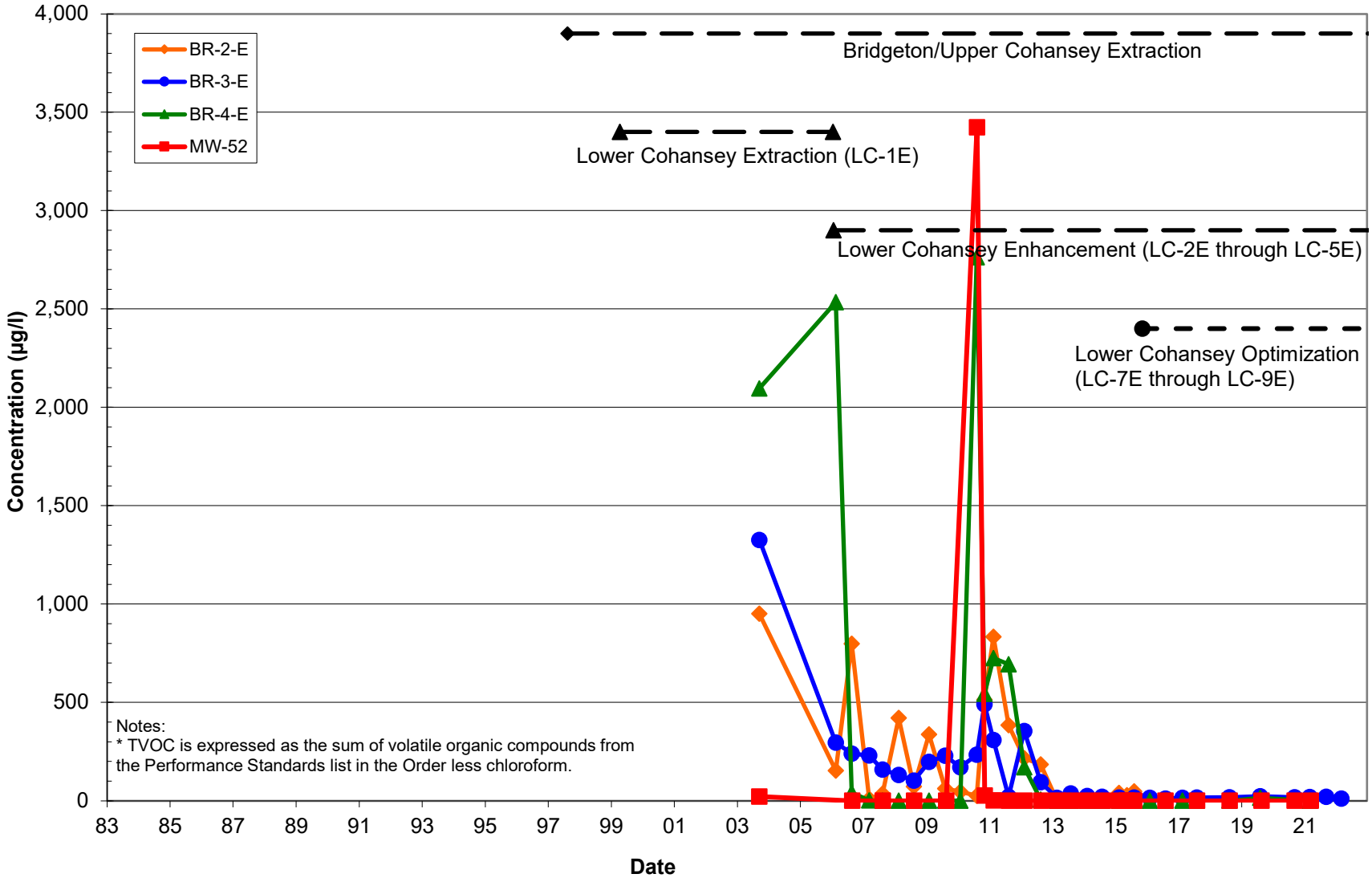
**D'Imperio Property Site**
**Semi-Annual (1H-2022)**
**Groundwater Sampling Report**

**FIGURE 3-13**
**TVOC* TRENDS IN SELECT WELLS (1 of 2)**
**D'Imperio Property Site**
**Bridgeton Aquifer Plume**



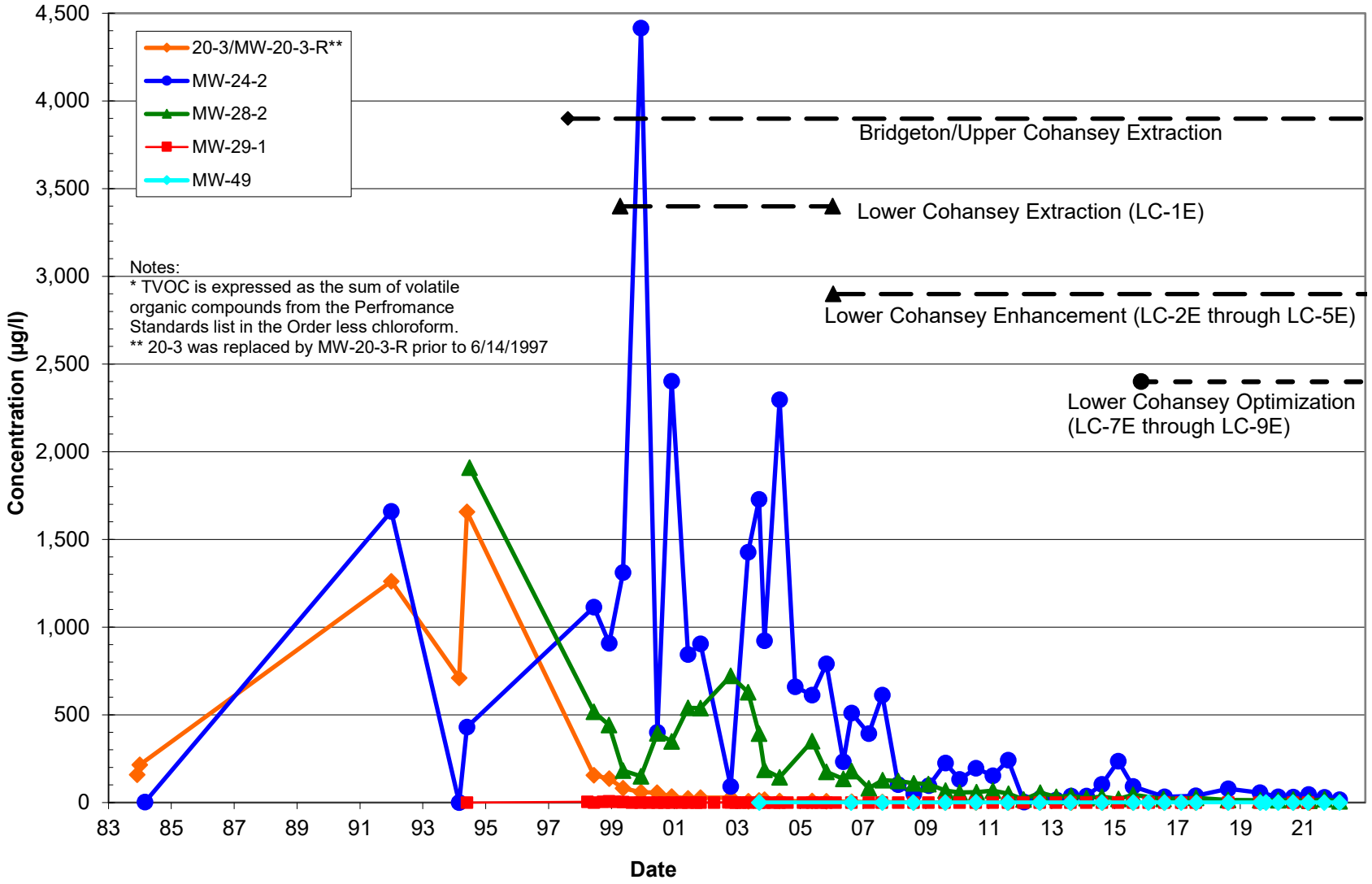

c:\users\cmeyn\bcpw\d2535129\TVO_Graphs_2021\Figure_3-13_Tbr_Graph 3/23/2022

**FIGURE 3-14**
**TVOC* TRENDS IN SELECT WELLS (2 of 2)**
**D'Imperio Property Site**
**Bridgeton Aquifer Plume**



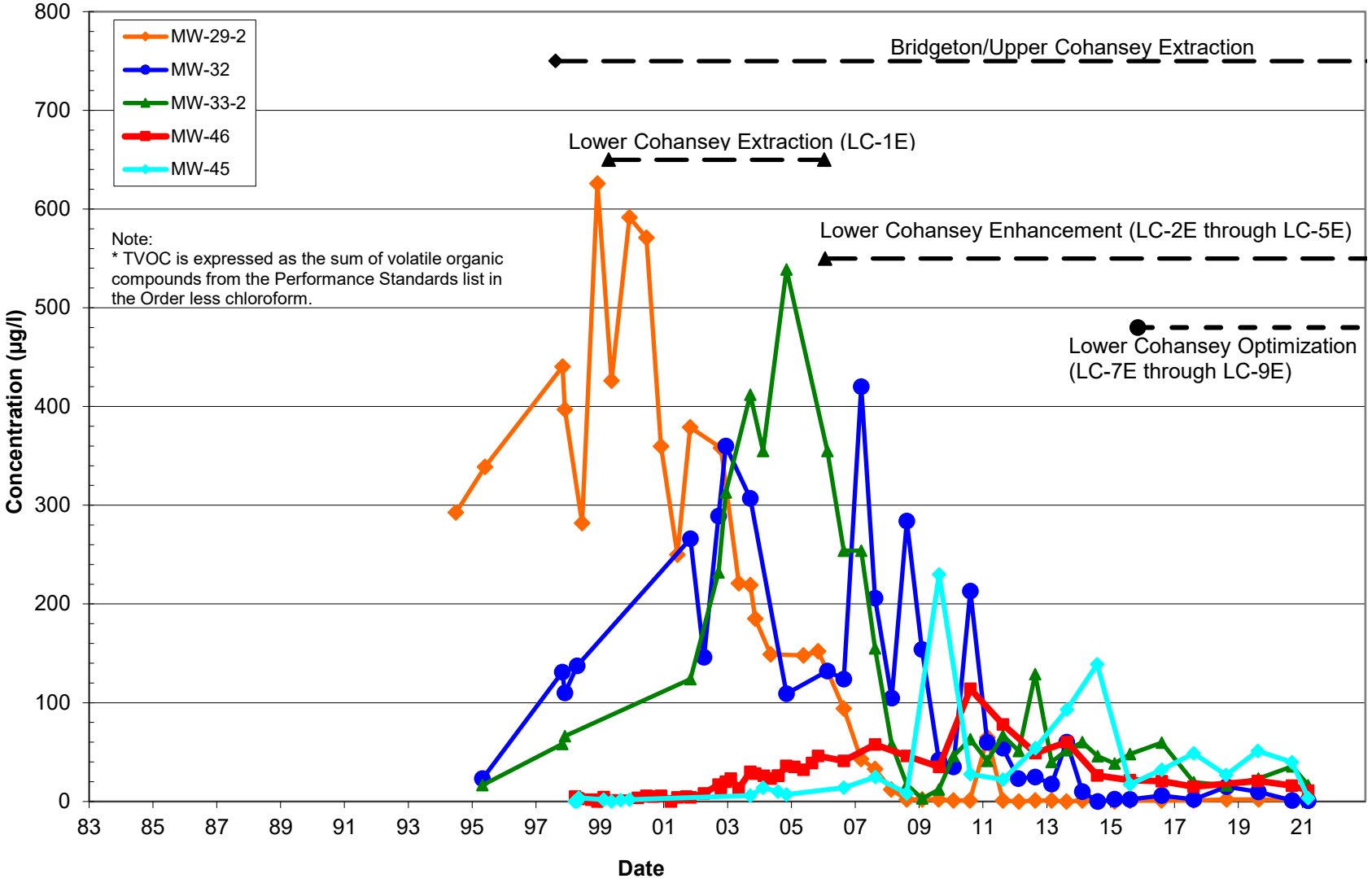

c:\users\cmeyn\bcpw\d2535129\TVO_Graphs_2021\Figure_3-14_Tbr_Graph 3/23/2022

**FIGURE 3-15**
**TVOC* TRENDS IN SELECT WELLS**
**D'Imperio Property Site**
**Upper Cohansey Aquifer Plume**




c:\users\cmeyn\bcpw\d2535129\TVO_Graphs_2021\Figure_3-15_Tuco_Graph 3/23/2022

**FIGURE 3-16**
**TVOC* TRENDS IN SELECT WELLS**
**D'Imperio Property Site**
**Lower Cohansey Main Plume**




c:\users\cmeyn\bcpw\d2535129\TVO_Graphs_2021\Figure_3-16_Tlco_Graph 3/23/2022

**Figure 3-17**
**TVOC* Trends in Sentinel Wells**
**D'Imperio Property Site**
**Lower Cohansey Main Plume**

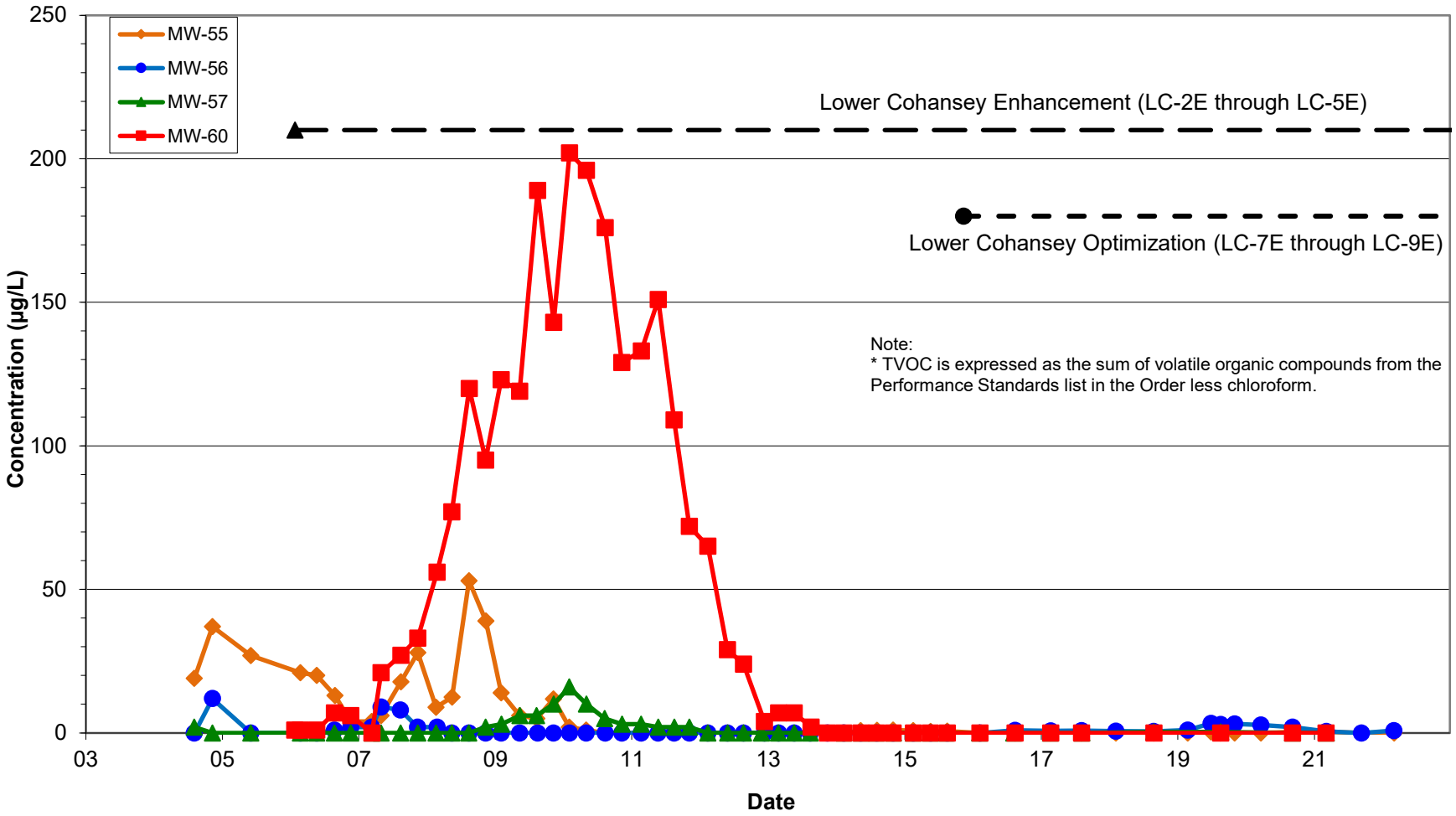


**Figure 3-18**
**TVOC* Trends in Side-Gradient Wells**
**D'Imperio Property Site**
**Lower Cohansey Main Plume**

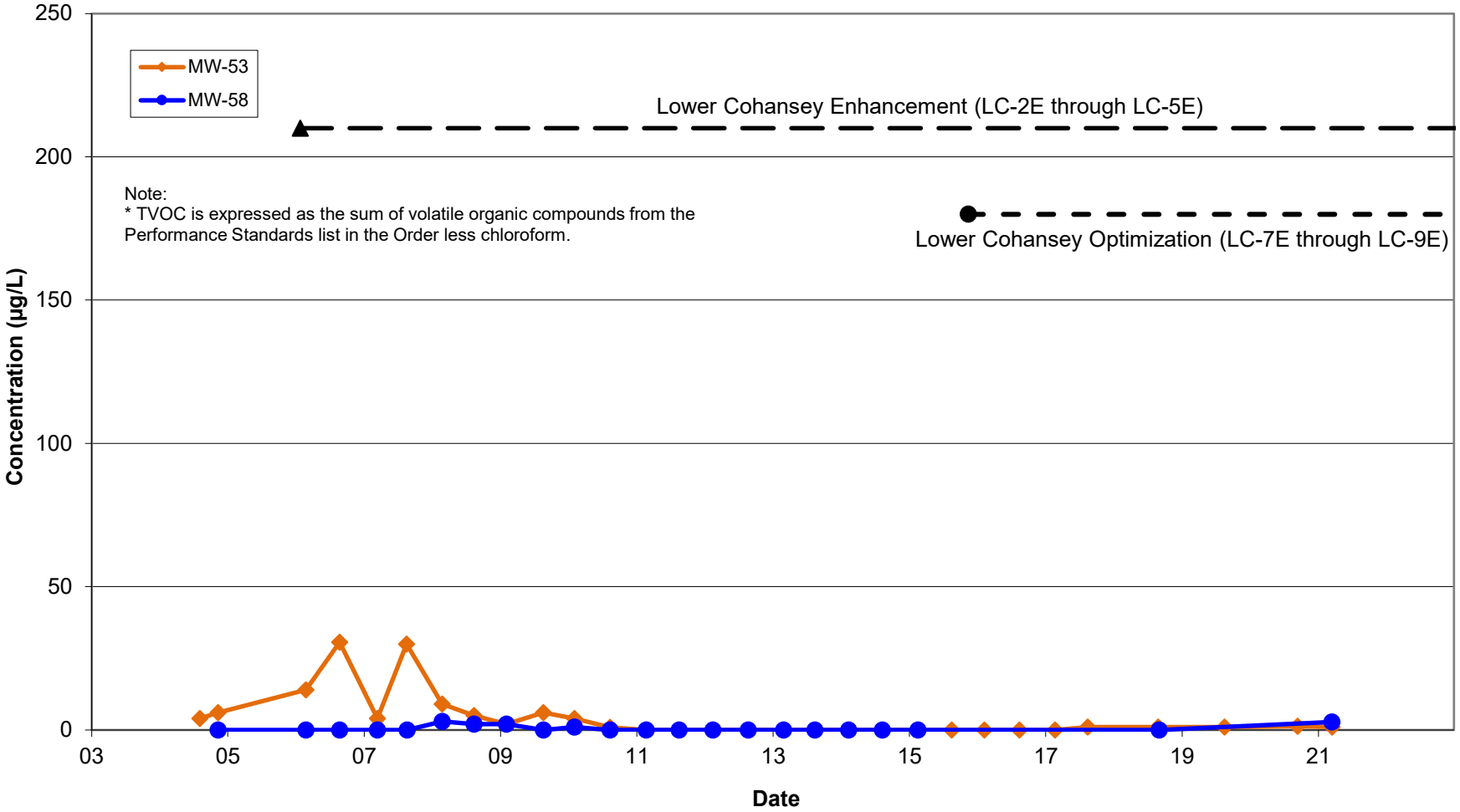


**Figure 3-19**
**TVOC* Trends in Plume Wells**
**D'Imperio Property Site**
**Lower Cohansey Main Plume**

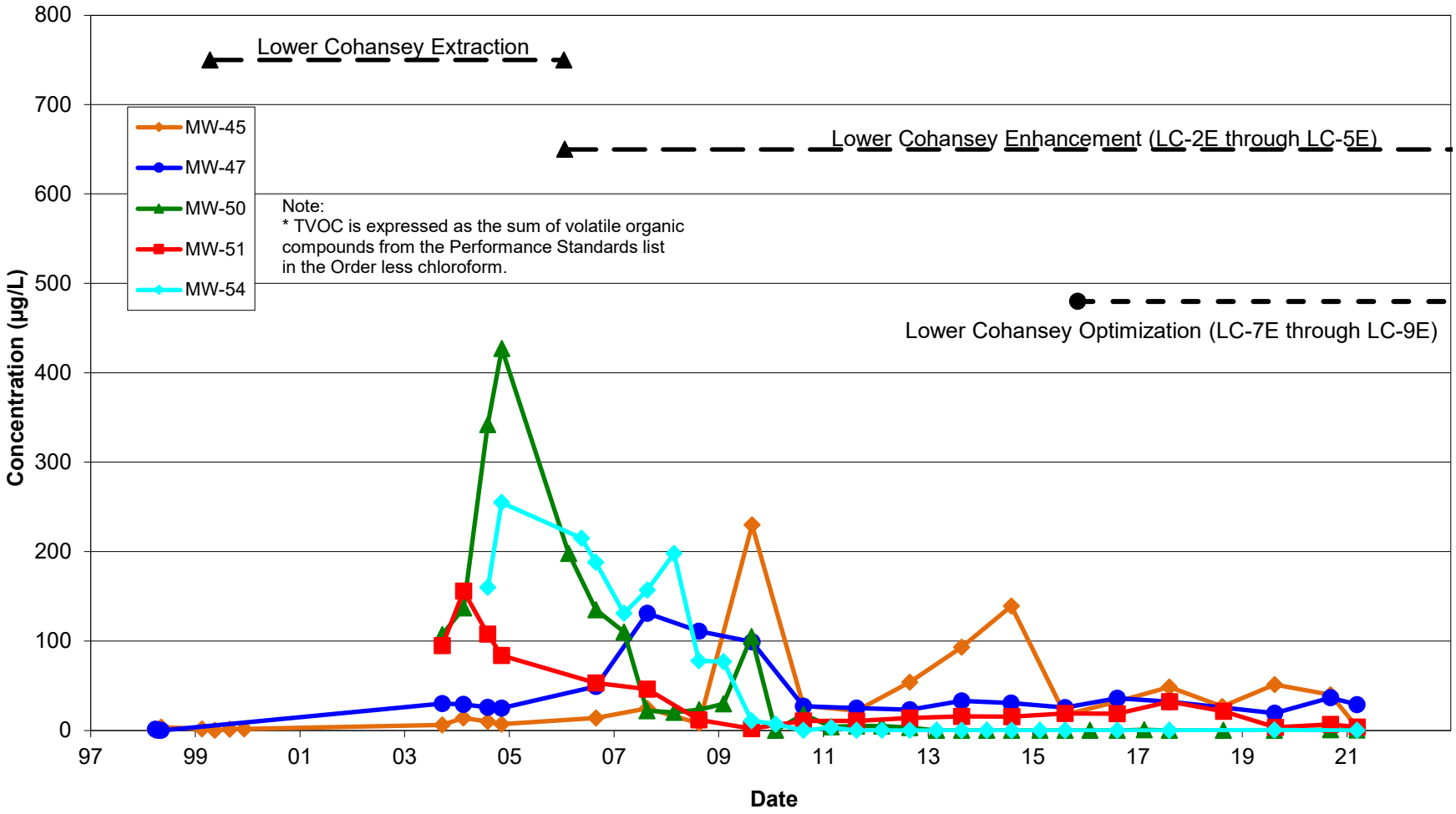


**Figure 3-20**
**TVOC* Trends in Observation Wells**
**D'Imperio Property Site**
**Lower Cohansey Main Plume**

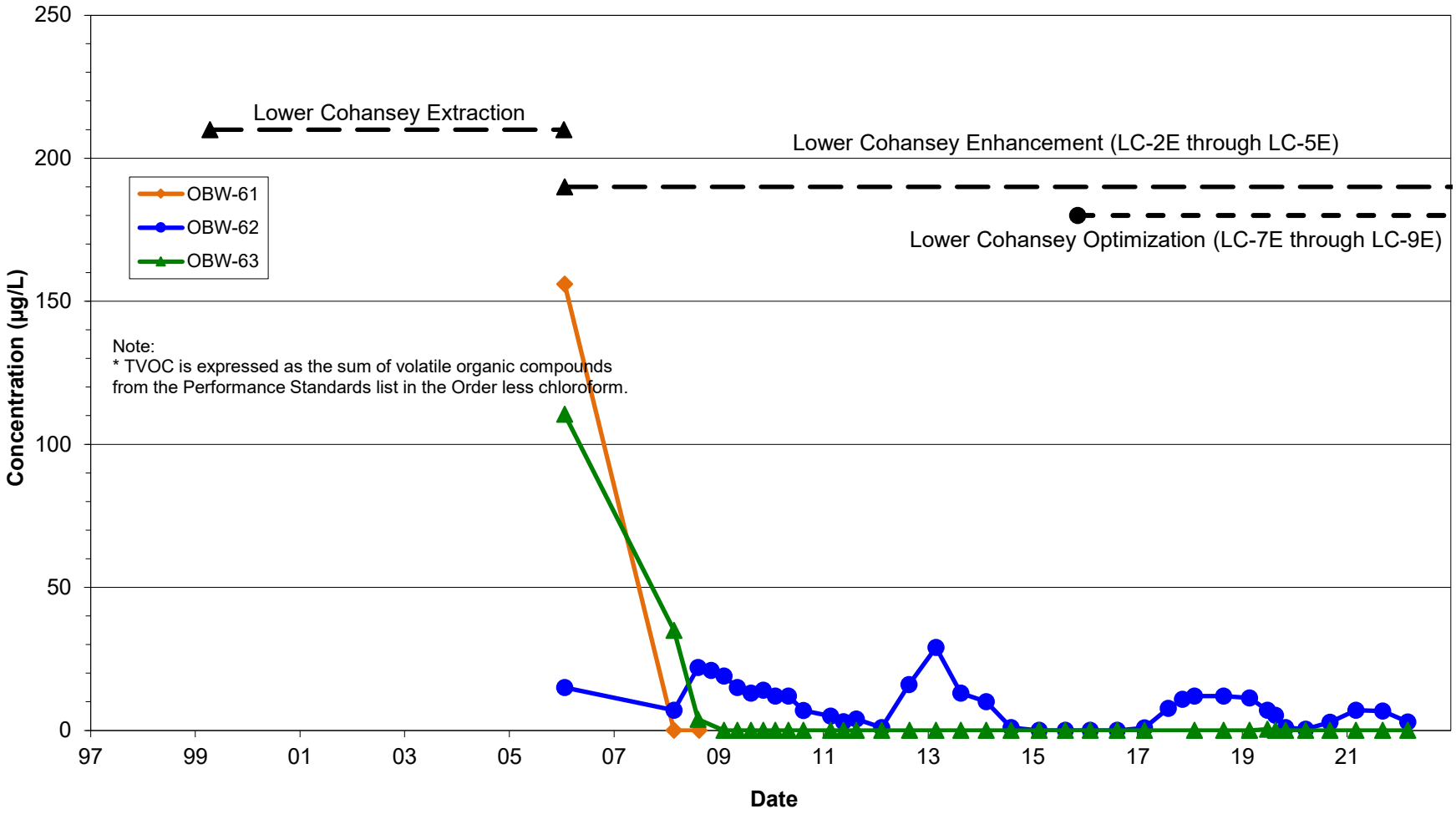
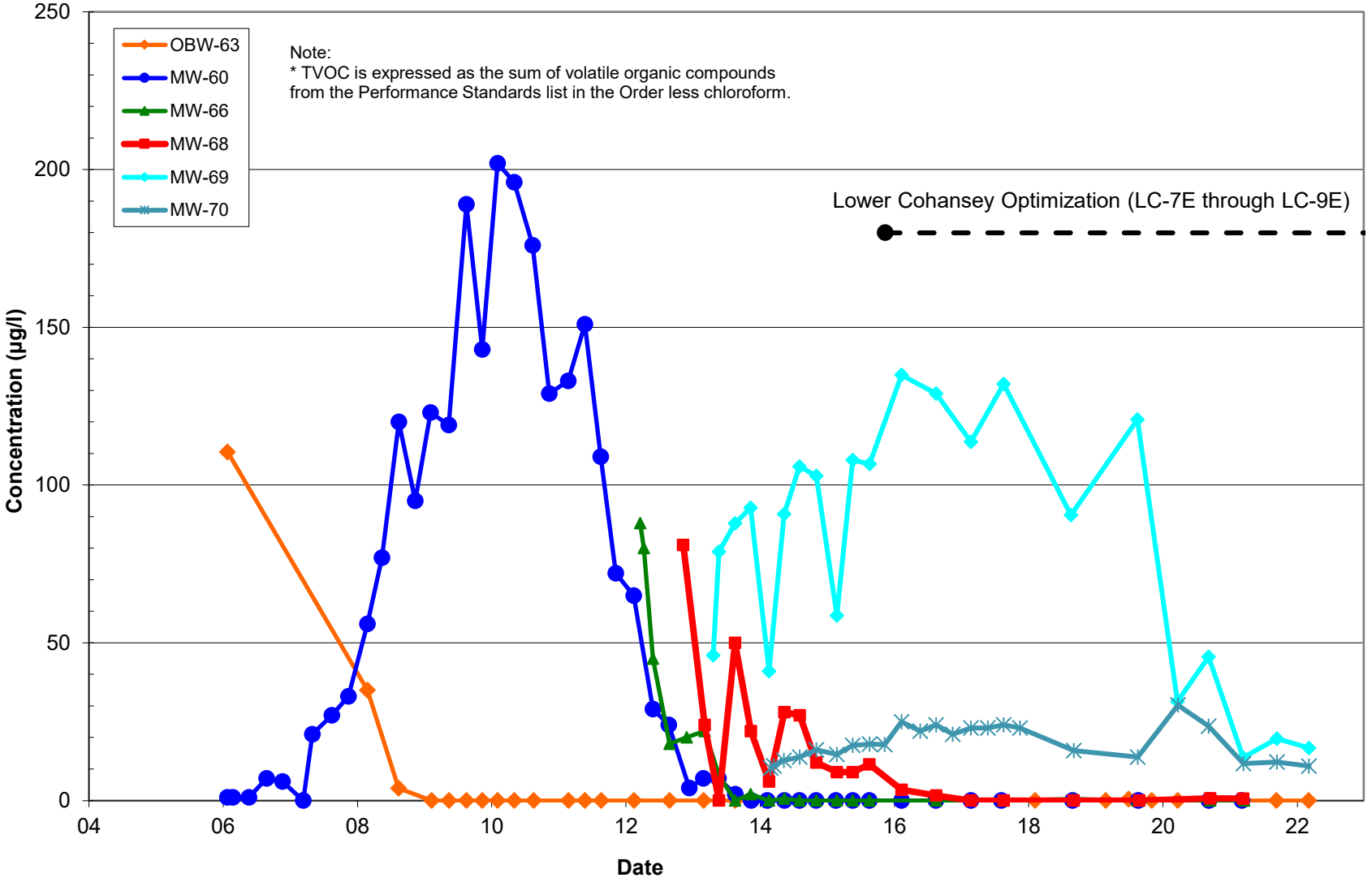


**FIGURE 3-21**
**TVOC* Trends in Select LCDP Wells**
**D'Imperio Property Site**
**Lower Cohansey Formation**

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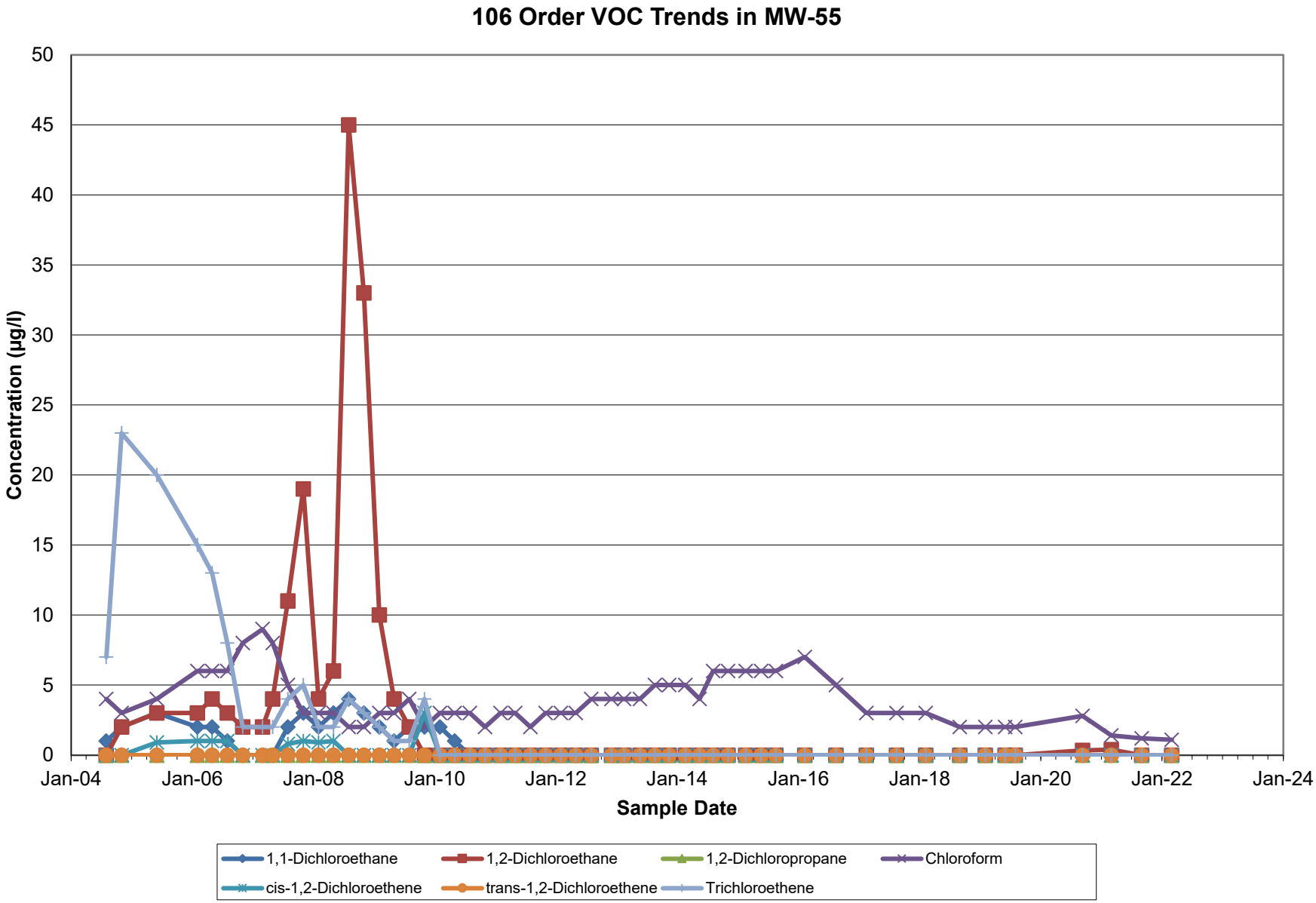
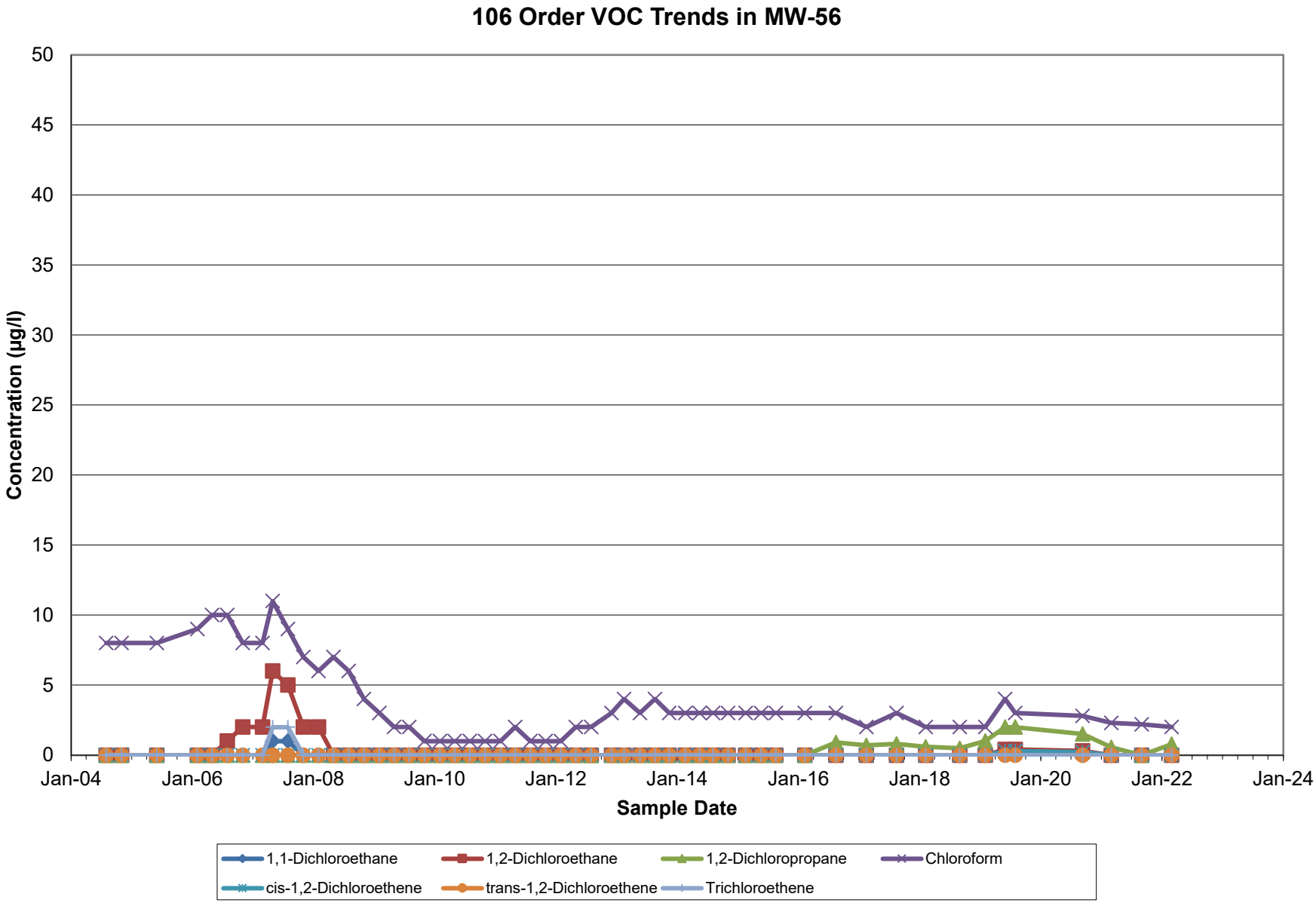
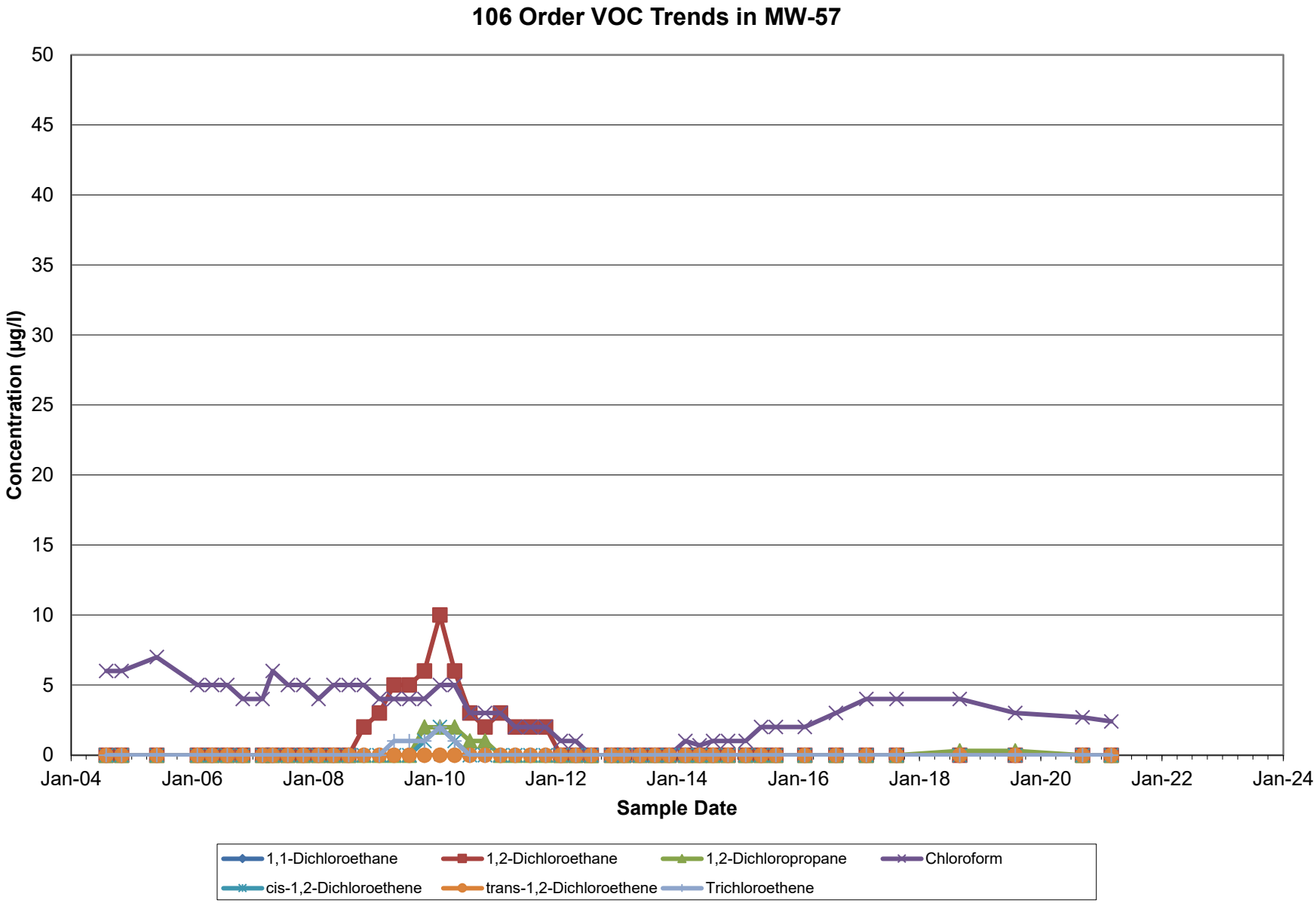
# ATTACHMENT 9

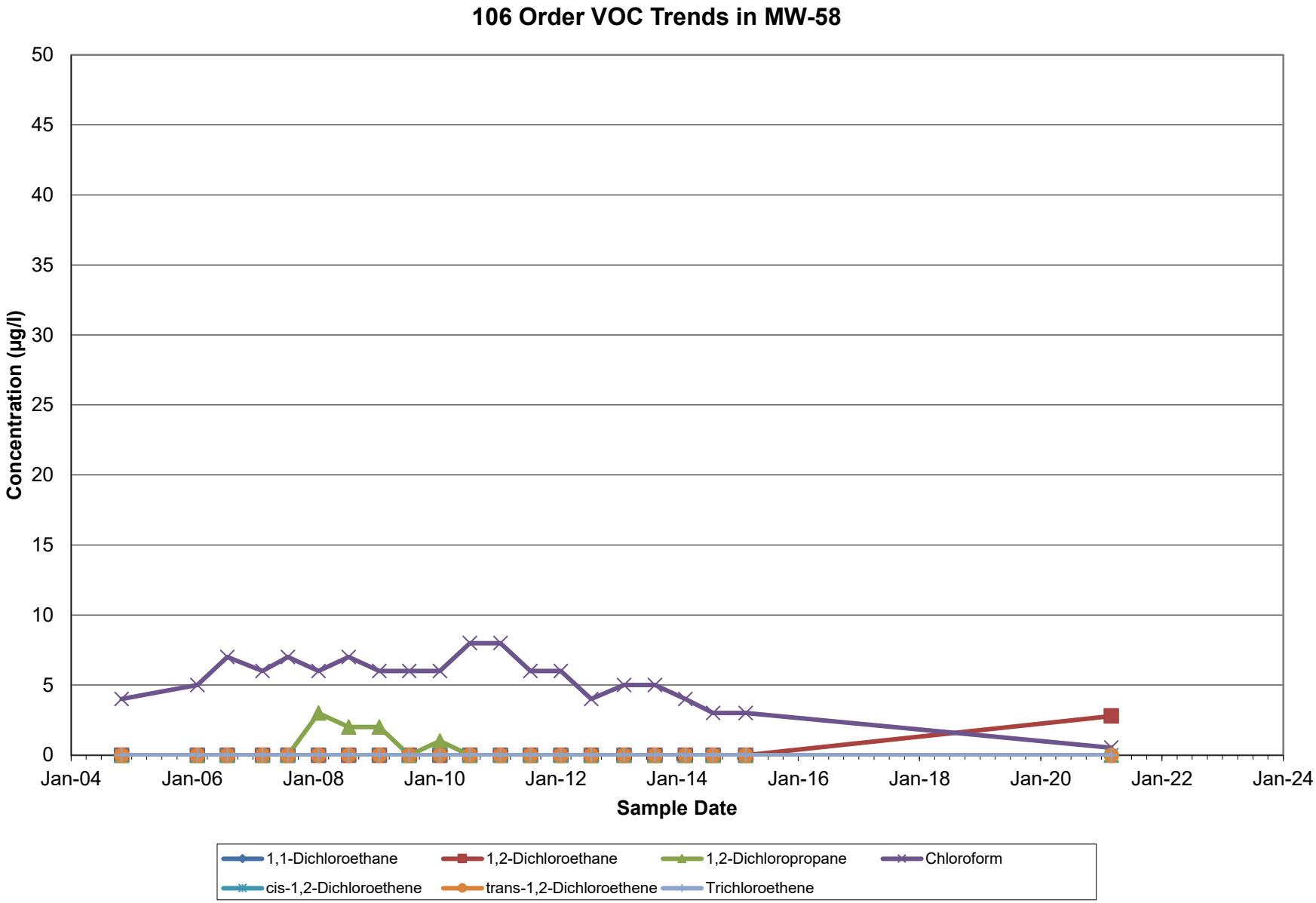
## Lower Cohansey Main Plume
## TVOC Trends for Sentinel,
## Side-gradient and Observation Wells

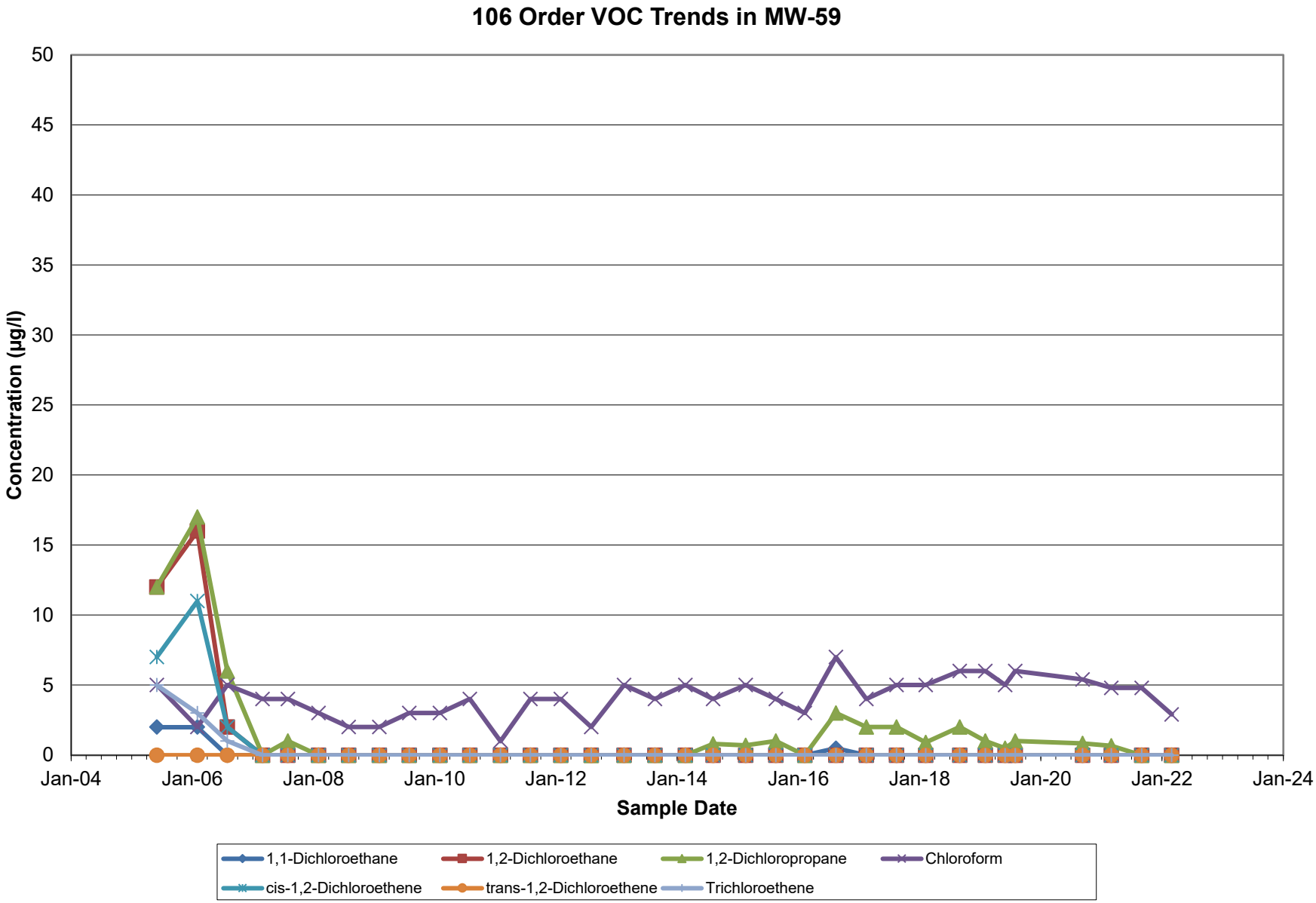
**D'Imperio Property Site**
**Semi-Annual (1H-2022)**
**Groundwater Sampling Report**

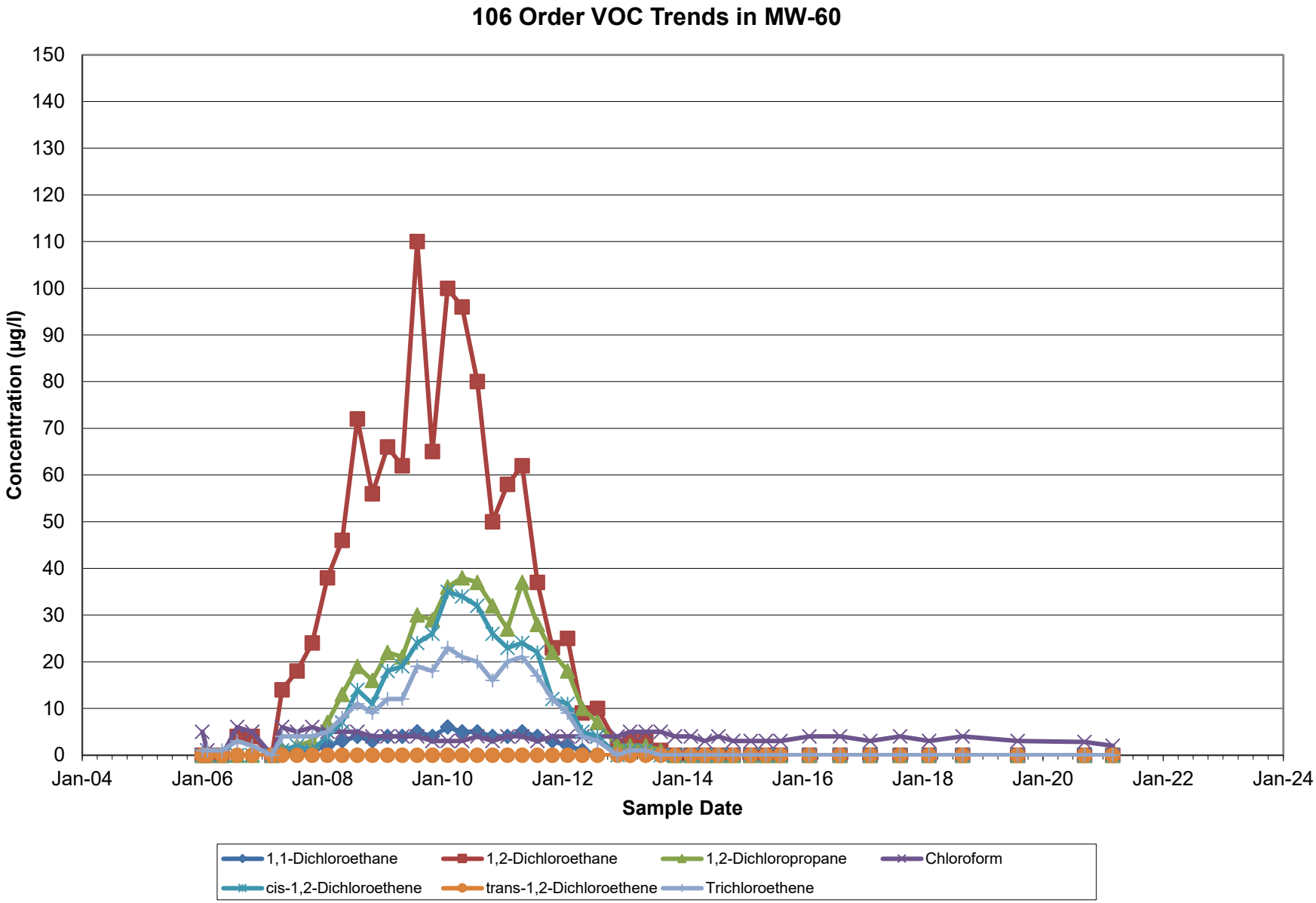

106 Order VOC Trends in MW-55
Concentration (µg/l)
50
45
40
35
30
25
20
15
10
5
0
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20
Jan-22
Jan-24
Sample Date
1,1-Dichloroethane
1,2-Dichloroethane
1,2-Dichloropropane
Chloroform
cis-1,2-Dichloroethene
trans-1,2-Dichloroethene
Trichloroethene

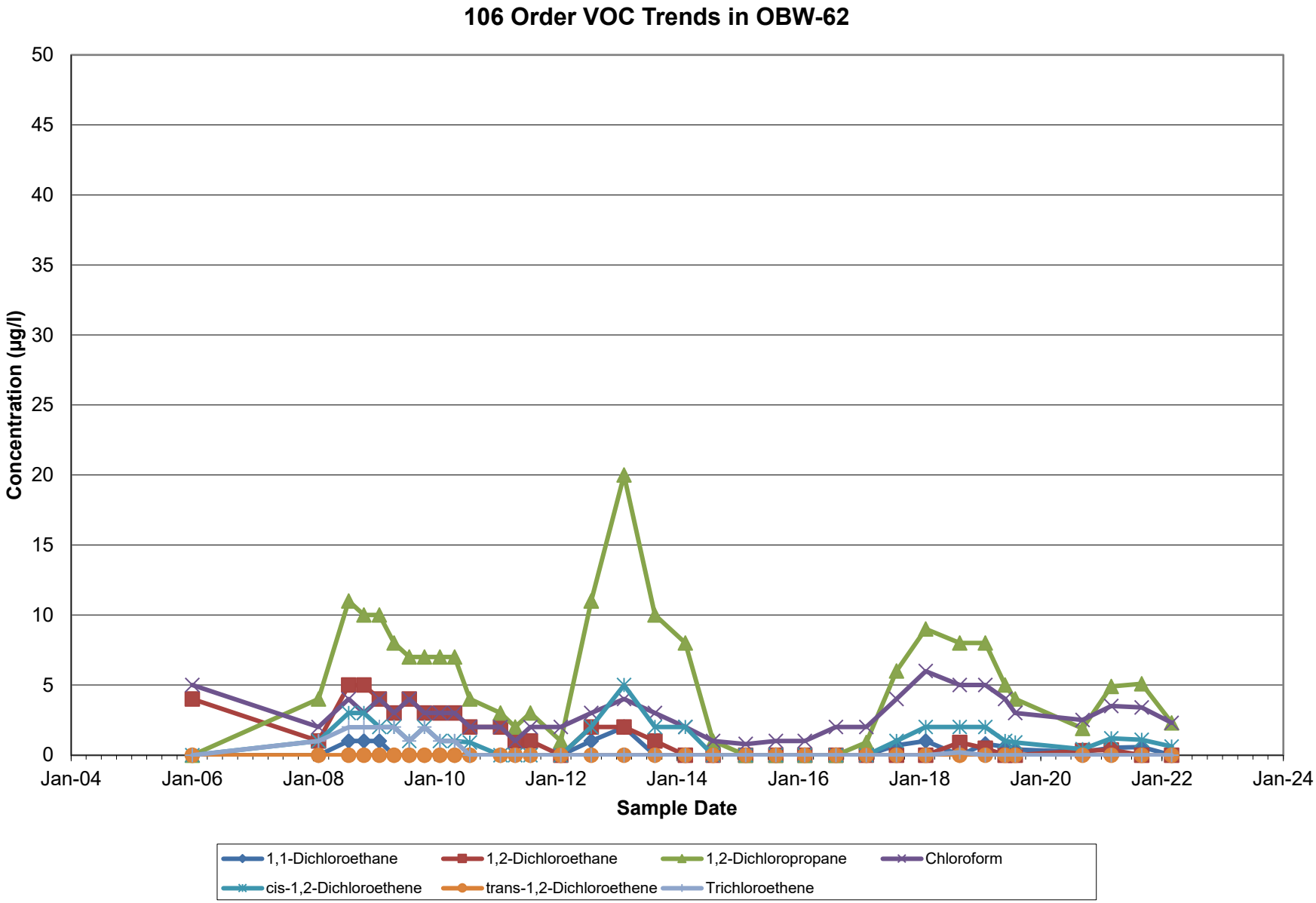

106 Order VOC Trends in MW-56
Concentration (µg/l)
50
45
40
35
30
25
20
15
10
5
0
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20
Jan-22
Jan-24
Sample Date
1,1-Dichloroethane
1,2-Dichloroethane
1,2-Dichloropropane
Chloroform
cis-1,2-Dichloroethene
trans-1,2-Dichloroethene
Trichloroethene

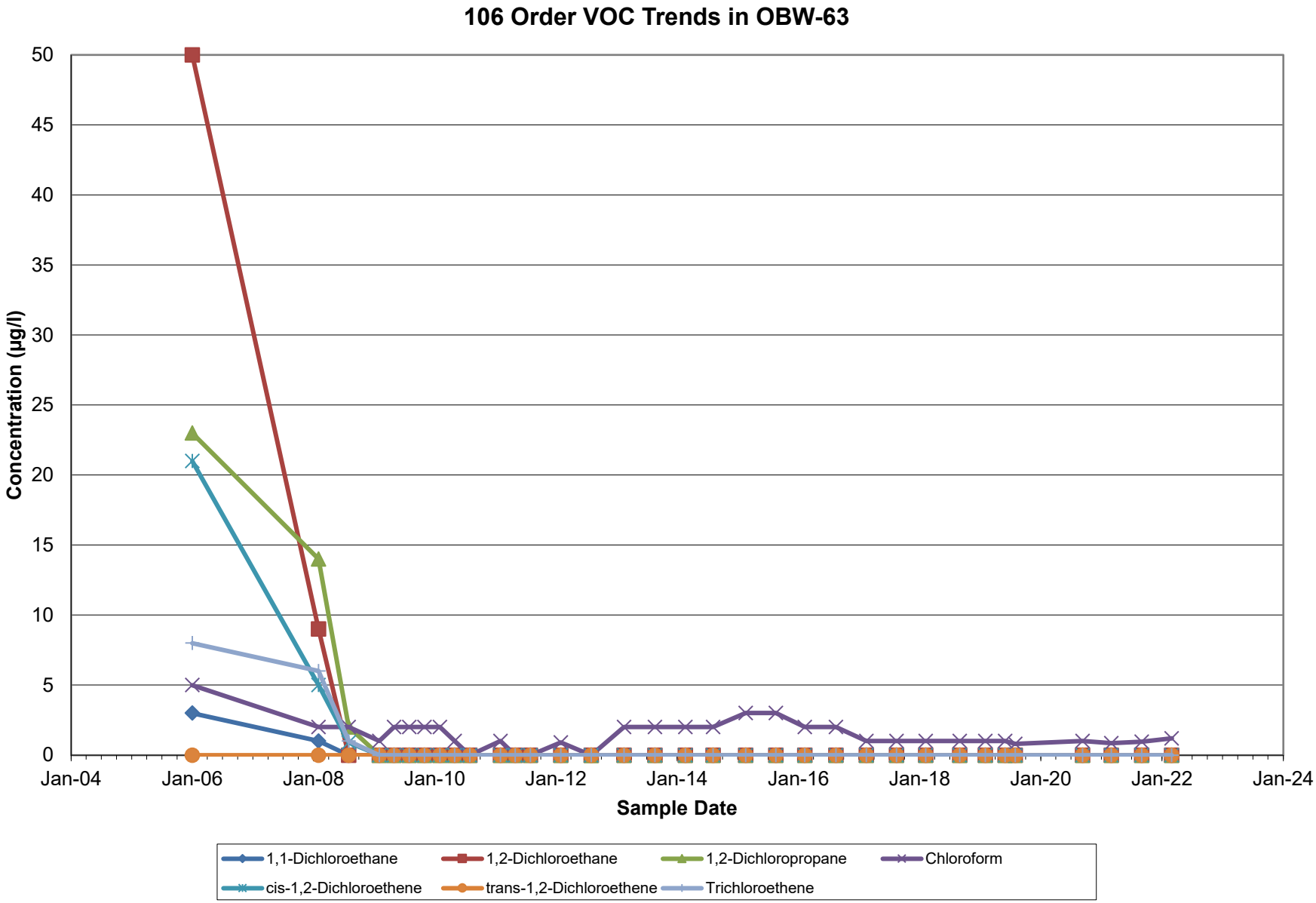

106 Order VOC Trends in MW-57
Concentration (µg/l)
50
45
40
35
30
25
20
15
10
5
0
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20
Jan-22
Jan-24
Sample Date
1,1-Dichloroethane
1,2-Dichloroethane
1,2-Dichloropropane
Chloroform
cis-1,2-Dichloroethene
trans-1,2-Dichloroethene
Trichloroethene


106 Order VOC Trends in MW-58
Concentration (µg/l)
50
45
40
35
30
25
20
15
10
5
0
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20
Jan-22
Jan-24
Sample Date
1,1-Dichloroethane
1,2-Dichloroethane
1,2-Dichloropropane
Chloroform
cis-1,2-Dichloroethene
trans-1,2-Dichloroethene
Trichloroethene


106 Order VOC Trends in MW-59
Concentration (µg/l)
50
45
40
35
30
25
20
15
10
5
0
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20
Jan-22
Jan-24
Sample Date
1,1-Dichloroethane
1,2-Dichloroethane
1,2-Dichloropropane
Chloroform
cis-1,2-Dichloroethene
trans-1,2-Dichloroethene
Trichloroethene


106 Order VOC Trends in MW-60
Concentration (µg/l)
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20
Jan-22
Jan-24
Sample Date
1,1-Dichloroethane
1,2-Dichloroethane
1,2-Dichloropropane
Chloroform
cis-1,2-Dichloroethene
trans-1,2-Dichloroethene
Trichloroethene


106 Order VOC Trends in OBW-62
Concentration (µg/l)
50
45
40
35
30
25
20
15
10
5
0
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20
Jan-22
Jan-24
Sample Date
1,1-Dichloroethane
1,2-Dichloroethane
1,2-Dichloropropane
Chloroform
cis-1,2-Dichloroethene
trans-1,2-Dichloroethene
Trichloroethene


106 Order VOC Trends in OBW-63
Concentration (µg/l)
50
45
40
35
30
25
20
15
10
5
0
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20
Jan-22
Jan-24
Sample Date
1,1-Dichloroethane
1,2-Dichloroethane
1,2-Dichloropropane
Chloroform
cis-1,2-Dichloroethene
trans-1,2-Dichloroethene
Trichloroethene

# ATTACHMENT 10

# LCDP Monitoring Well Trends (2005 – 2022)

**D'Imperio Property Site**
**Semi-Annual (1H-2022)**
**Groundwater Sampling Report**

**Figure 3-5**
**Time-Series Graph of Selected LCDP Well Data**